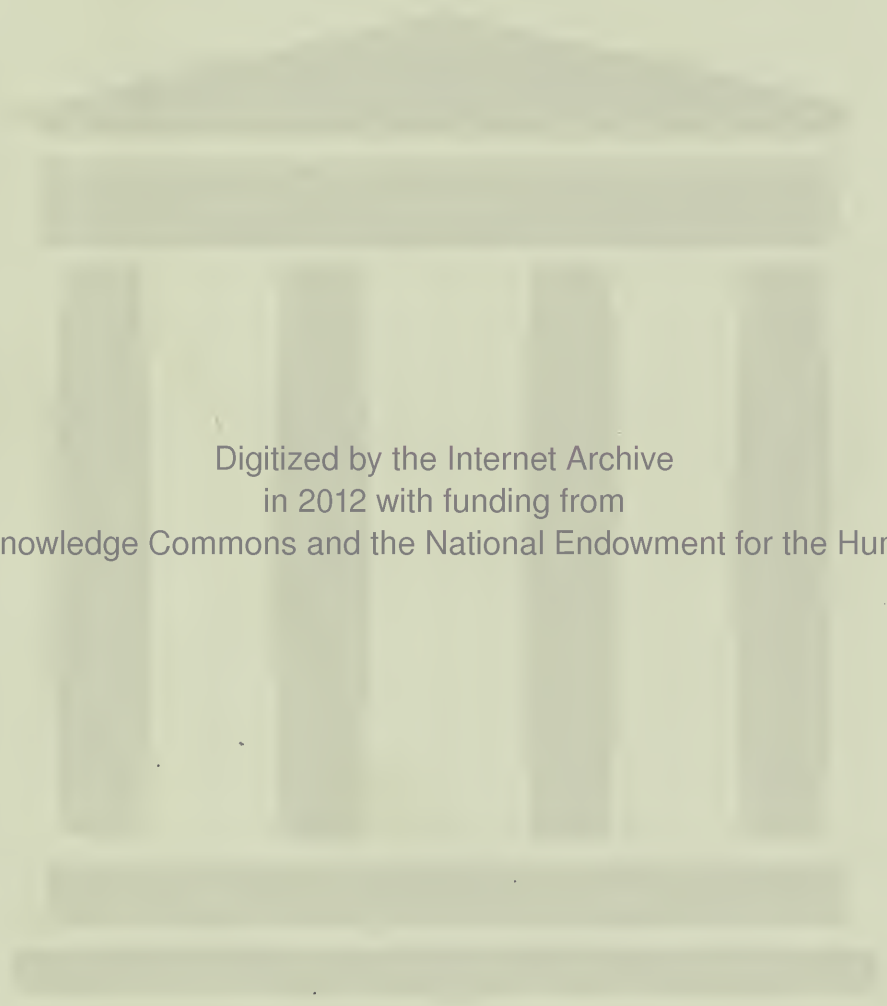


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THE AMERICAN MEDICAL MONTHLY AND NEW YORK REVIEW.

JANUARY, 1861.

ESSAYS, MONOGRAPHS, AND CASES.

An Effort to shorten the Duration, and diminish the Pain, of the First Stage of Labor, with a Record of One Hundred and Forty-seven Cases. By B. FORDYCE BARKER, M.D., Obstetric Physician to Bellevue Hospital.

Modern obstetricians divide labor into three stages. The first stage is said to commence with the beginning of labor, and to end with the complete dilatation of the cervix uteri; the second stage ends with the expulsion of the child, and the third includes the delivery of the placenta. But there is a precursory period, during which the uterine neck is preparing for the first stage of labor. This period commences in some two weeks, and in others not more than five or six days, before labor may be said to actually begin. During this time the uterine tumor becomes sensibly lower, and this change is accompanied with a corresponding change in the symptoms. The respiration becomes free, the action of the diaphragm is less impeded, and the stomach is no longer compressed; while nausea and vomiting, if they have existed in the latter stages of pregnancy, now disappear. At the same time that the thoracic and epigastric symp-

toms disappear, a new order of symptoms, referrible to the pelvic organs, take their place. There is a pressure on the rectum and bladder, producing sometimes frequent desire to evacuate the bowels and bladder, tenesmus and dysury, and increased œdema of the genital parts and lower extremities. Walking often becomes painful and difficult, and sometimes even impossible. During this time, also, the woman frequently suffers from pains, short in duration, and occurring at distant intervals, but gradually increasing in length and frequency. This is very generally the fact with primiparæ. These pains are coincident with the uterine contractions; for if the hand be placed over the uterine globe during the time of the pain, it will be found hardening, and, as the pain disappears, gradually relaxing. In the multiparæ, these contractions frequently exist with scarcely any pain. In the primiparæ, it has been remarked, and the experience of most obstetricians will confirm the remark, that when no cause of dystocia exists, the labor is usually much more rapid in those females who have suffered from frequent pains during the last fortnight of their pregnancy.

We are indebted to modern science for the true explanation of these precursory phenomena. It was formerly taught that at the end of the sixth month of pregnancy, the os internum or the upper portion of the cervix uteri began to open, so as to aid in the enlargement of the body of the uterus; and that this spreading at the upper part continued to advance in proportion as the term of gestation approaches, and consequently, that the length of the neck decreases from above downward, so that the neck entirely disappears at the end of pregnancy. But it has now been established beyond cavil, that the neck has no participation with the body, in forming the uterine walls to inclose the fœtus; but that, on the contrary, the cervix uteri preserves its whole length until the last fortnight of pregnancy. The neck of the uterus undergoes most important changes during the period of gestation, but a discussion of these changes is not pertinent to the subject of this paper. It is sufficient to say here, that the neck of the uterus contributes in no degree to the capacity of the body for retaining the fœtus. But during the last fortnight of pregnancy, its length diminishes very rapidly, opening from above downward until it is wholly effaced. The precursory phenomena alluded to above are due to these changes. To use the language of Caseaux, "in the last fortnight, the internal orifice softens and yields to distention, then expands from above, so that the upper half of the neck gradually becomes confounded with the cavity of the body; the

lower part of the ovum will evidently engage in the dilated portion, and soon come in contact with the parts in the neighborhood of the external orifice. This contact occasions a progressive irritation of the nervous fibres of the lower half of the cervix, which, by reacting upon the body, excites its contractions, until finally, the entire neck, being effaced, the irritation reaches its maximum, and labor commences."

The phenomena of the first stage of labor pertain, then, to the dilatation of the *external orifice* of the neck of the uterus. Obstetricians are generally agreed in saying that the duration of this stage is two or three times the length of the second stage, where no cause of dystocia exists. The pains of this stage are of a peculiar character. They are usually borne with more impatience, and very much less fortitude, than those of the second stage. They are greatly dreaded by the patient, who has an instinctive feeling that they are doing no good. She gives utterance to sharp expressions of suffering when the glottis is free and open during the act of expiration. The pains of the second stage seem to be suppressed, like a person carrying a heavy burden, and are scarcely heard except during inspiration. The pains of the first stage are avoided as much as possible, while the patient seems frequently to solicit and invite those of the second. The expressions of the first stage have been characterized as those of *suffering*—the expressions of the second as those of *exertion*. In ordinary language, the term pain in labor is used as synonymous with contraction, and we speak of its returns, duration, intensity, and weakness, to describe the force and efficiency of the uterine contractions. But this is by no means strictly correct. The muscular contractility of the uterus is precisely of the same nature as that of the other hollow organs, as the bladder and the rectum, and is never developed except under the influence of some stimulant or irritant. The exercise of this organic contractility is usually accompanied with pain in the human female, but this is by no means the invariable rule. Dilatation of the upper portion of the neck is very frequently accomplished under the influence of contractions which are not perceptible to the patient; and in some patients, the same remark is true in regard to the dilatation of the os externum. The intensity of this organic contractility varies extremely in different females; being very strong in some, and scarcely perceptible in others. Its energy bears no relation to the external muscular system; for some strong, muscular women have very weak contractions during labor, and some very weak, feeble women have very strong contractions. This organic cou-

tractility is, like all muscular power, exhausted by prolonged exercise, as we often see the labor commence with strong, vigorous, and frequently recurring pains, which, after some hours, become slow and feeble, and sometimes cease altogether for a while. For this reason, the duration of the first stage of labor may greatly influence the favorable progress and length of the second stage. It is usually said that the first stage may be prolonged without danger, and that the only inconveniences resulting are, the great fatigue caused particularly by the loss of sleep, and, in nervous women, considerable irritation, depression of spirits, and alarm; while the second stage cannot be prolonged beyond certain limits without greatly endangering the health of the patient, and oftentimes the life of the child.

The first part of this proposition is true, so far as the immediate results are concerned, but it may be quite the reverse from the exhaustion of the muscular contractility produced; thus inducing a feeble and inefficient action of the organ in the second stage of labor.

It is obvious that if the dilatation of the os externum could be accomplished by comparatively painless contractions, as is ordinarily the dilatation of the upper portion of the cervix uteri, a great point will be gained in mitigating "the pains and pangs of labor;" and where no cause of dystocia exists, there is a strong probability that the duration of the second stage would be decidedly decreased.

In 1854, at the close of one of my lectures, I was informed by one of the students that his father, a physician in Ohio, was in the habit of giving belladonna internally, as a preparation for labor. I very much regret that I have lost the name of the gentleman, although I have made repeated efforts to ascertain it. The hint given led to a series of experiments, the results of which will be seen in the table of 147 cases of labor, in which I have been able to test the effects of this plan. I have aimed to commence the treatment about two weeks before the end of gestation; but of course the data for calculation are so uncertain, that the length of time that the medicine was taken varied much from this period. The treatment has been tried with only a part, I may say a small part, of my obstetric patients, for many reasons. In many cases, I have first seen the patient when labor has begun, without having been previously engaged. In others, labor has come on within two or three days after the treatment has been commenced. These are not included in the table. Others, again, I have attended in former labors, and have not been called until the second stage of labor had commenced. Only those are included in the table where the plan has been to a satisfactory degree tested. I have found

a very great difference in patients as to their susceptibility to the influence of the agent, and also a great difference in the purity and strength of the article. One extract would seem to have double the potency of another, without any corresponding difference in the appearance, color, or odor.

I have aimed to commence always with a minimum dose, but in some cases, owing either to the idiosyncrasy of the patient, or the unusual strength of the article, I have been obliged to diminish the dose; but in most cases it has been gradually doubled, or even tripled. The test has been, the constitutional effects of the article exhibited in a slight degree; as, dryness of the throat, slight uneasiness or giddiness of the head, or dimness of the vision. I direct that any or all of these symptoms should be watched for, and if they appear, to slightly diminish the dose; that is, take it twice instead of thrice a day. In but one case have I had any really unpleasant effects produced. This patient had been poisoned in her childhood by eating the berries of the belladonna, and after taking the article for three days, its constitutional effects were suddenly developed, and excited great alarm on the part of her friends. The symptoms, however, disappeared in the course of twenty-four hours. Labor came on the second day after the disappearance of the symptoms, and was so rapid that I did not see the patient until it was completed. Her first labor (this was the second) was reported to have been thirty-six hours in duration.

In not one of the cases was the child still-born, and in none of them was there post partum hæmorrhage or retention of the placenta. In one, the function of lactation was entirely absent; and in two others, the mammary secretion did not appear until the fifth day. Where the patient was plethoric, of a full habit, rigid fibre and active circulation, I have combined the antimon. et potass. tart., as in the following formula:

R.—Belladon. ext.,	gr. viij.
Antimon. et potass. tart.,	gr. ij.
Syr. aurantii,	℥ ij.
Tinc. aurantii,	
Aquæ,	aa., ℥ j.

M. S. A tea-spoonful three times a day.

In all the cases, I have commenced with the extract of the belladonna, in one-quarter-grain doses. With some I have made use of the following formula:

R.—Tinc. cinchon. co.,	℥ ij.
Syr.,	℥ j.
Belladon. ext.,	gr. viij. M.

Where special indications have existed, I have combined the belladonna with a great variety of other articles. The test of a larger experience and of other careful observers is needed to determine whether this prophylactic plan is a real contribution to the progress of the obstetric art.

Table of One Hundred and Forty-seven Cases of Labor.

No. of Case.	No. of Pregnancy.	No. of Days Bella-donna was taken.	Hours 1st Stage.	Hours 2d Stage.	Minutes 3d Stage.	Presentation and Position.	Chloroform, No. of Hours.	Size and Weight of Child.	REMARKS.
1	1	8	5	7	20m.	v. l. o. i. an.	6hs	b, 10 $\frac{1}{2}$ lbs	Patient very irritable and nervous before the chloroform was used.
2	3	17	3	2	15	do	2 $\frac{1}{2}$	Boy	
3	1	12	6	5	20	v. r. o. i.	3	Girl	Occiput rotated backward to the sacrum. Forceps.
4	1	14	11	9	20	do	8	B, 9 lbs	
5	4	12	2	3	15	v. l. o. i.	none	B, 7 lbs	
6	1	9	5	5 $\frac{1}{2}$	20	do	7	Boy	
7	3	15	4	1 $\frac{1}{2}$	15	do	1	Boy	
8	1	12	5	5	25	do	3 $\frac{1}{2}$	Girl	
9	1	12	6	7	15	do	5	Girl	
10	1	9	6	4	15	f. r. m. i.	1	Boy	Delivered by forceps, as the sounds of fetal heart were becoming very feeble.
11	1	12	3	7	20	v. r. o. i.	3 $\frac{1}{2}$	Girl	Delivery completed before my arrival. Former labors generally 24 hours.
12	1	8	11	5	20	v. l. o. i.	5	Girl	
13	8	15	unk.	1	5	unknown	..	Boy	
14	3	15	3	5	20	v. l. o. i.	3	Girl	Delivered by turning. In her two former labors the child was lost.
15	1	11	4	6	20	do	5	Girl	
16	1	9	10	6	15	do	6	Girl	
17	2	13	3	2	20	do	..	Boy	
18	1	16	8	5	20	do	4	Boy	
19	1	8	6	2	15	do	2	B, 6 lbs	
20	3	14	unk.	1	10	rt. shoul.	1	Boy	
21	1	10	4	4	25	v. l. o. i.	4	Girl	
22	1	14	5	3	20	do	4	Girl	
23	1	11	6	3	25	v. r. o. i.	2	Girl	
24	1	14	3	4	15	v. l. o. i.	2	Boy	
25	2	13	1	2	15	do	...	Boy	
26	1	15	5 $\frac{1}{2}$	4	20	do	4	Girl	
27	4	17	2	2 $\frac{1}{2}$	15	v. r. o. i.	2	Girl	
28	2	11	4	4 $\frac{1}{2}$	15	v. l. o. i.	4	Girl	
29	2	13	2	6	15	do	5	Boy	
30	1	10	11	3	15	do	1 $\frac{1}{2}$	Boy	
31	1	8	11	5	15	do	3	Boy	
32	5	14	1	3	15	do	...	Girl	
33	2	15	1	5	15	br'h, l. t. i	1	Girl	
34	1	8	8	3	15	v. l. o. i.	5	Girl	
35	1	12	4	4	15	do	2	Girl	

No. of Case.	No. of Pregnancy.	No. of Days Bella-donna was taken	Hours 1st Stage.	Hours 2d Stage.	Minutes 3d Stage	Presentation and Position.	Chloroform, No. of Hours.	Size and Weight of Child.	REMARKS.
36	3	16	..	1	15m.	....	...	Boy	Delivery completed before my arrival.
37	5	14	2	4	15	v. l. o. i.	3	Girl	
38	7	13	1½	3	20	v. r. o. i.	1	Boy	
39	1	12	8	5	20	v. l. o. i.	4	Boy	
40	3	11	8	2	20	do	1	G. 11lb.	
41	1	13	5	4	20	do	5	Boy	
42	5	13	2	1½	15	do	...	Boy	
43	1	10	5	4	15	do	4	Girl	
44	1	9	..	1½	20	do	1½	Boy	Convulsions. Found cervix dilated. Delivered by forceps. Convulsions ceased after delivery. Urine albuminous.
45	1	14	3	3	20	v. r. o. i.	2	Girl	
46	1	13	3	13	20	do	3	Girl	Delivered by turning. Slight contraction of antero-posterior diameter of superior strait.
47	4	15	2	3	5	v. l. o. i.	½	Boy	
48	3	11	4	1	10	do	...	Girl	
49	1	12	4	5	20	do	4	Girl	
50	1	13	5	2	10	do	½	Girl	
51	2	9	5	2	20	v. r. o. i.	1	Boy	
52	1	12	3	5	15	do	4	Girl	
53	4	16	..	2	15	v. l. o. i.	1	Boy	Where the duration of the 1st stage is not given, it is finished before I have seen the patient.
54	1	12	1	3	20	do	1½	Girl	
55	1	11	4	6	20	do	5	Girl	
56	9	11	..	2	20	do	...	Girl	
57	1	7	7	3	20	do	2	Boy	
58	4	14	2	1½	20	v. r. o. i.	½	Girl	
59	3	12	..	3	15	v. l. o. i.	1	Boy	
60	1	10	4	2	20	do	1	Boy	
61	1	10	4	6	25	do	4	Girl	
62	4	13	6	1	20	do	...	Girl	
63	1	9	5	4	5	do	2	Boy	
64	2	12	3	1	15	do	2	Girl	
65	1	15	6	6	20	v. r. o. i.	4	Girl	
66	3	8	2	1½	5	v. l. o. i.	...	B, 9 lbs	
67	7	16	3	1	20	do	½	Boy	
68	1	12	3	4	15	do	2	Boy	
69	3	13	2	5	25	do	2	Girl	
70	1	9	6	3	15	do	1	Girl	
71	2	15	..	4	5	v. r. o. i.	...	Boy	
72	1	12	4	2	15	do	1	Boy	
73	5	14	1	3	15	v. l. o. i.	½	Boy	
74	1	11	4	2	20	do	1	Girl	
75	2	11	5	3	5	do	3	Girl	
76	1	13	18	3	20	do	7	Boy	Patient very irritable; albuminous urine, but no convulsions.
77	1	8	16	4	20	v. r. o. i.	12	Boy	Convulsions. Patient very full habit. V. S. oz. xxv., then chloroform, after which no more convulsions.

No. of Case.	No. of Pregnancy.	No. of Days Bella-donna was taken.	Hours 1st Stage.	Hours 2d Stage.	Minutes 3d Stage.	Presentation and Position.	Chloroform, No. of Hours.	Size and Weight of Child.	REMARKS.
78	3	12	1	3	15m.	v. l. o. i.	1	Boy	
79	1	10	6	4	15	do	1	Girl	
80	2	9	6	3	20	do	1	Girl	
81	3	12	..	2	15	do	....	Boy	
82	1	9	3	3	20	do	2	Girl	
83	2	13	5	4	15	do	1	Girl	
84	1	15	7	3	20	do	2	Boy	
85	3	12	2	3	15	do	....	Girl	
86	5	7	6	1	20	v. r. o. i.	2	Girl	
87	1	13	8	5	5	do	4	Boy	
88	3	9	..	2	15	v. l. o. i.	....	Boy	
89	7	13	3	4	5	do, rt. ha.	2	Boy	
90	2	10	4	4	25	v. l. o. i.	1	Boy	
91	1	9	12	6	15	do	7	Boy	
92	3	11	2	5	15	do	2	Girl	
93	3	13	7	1	15	b'ch, l.s.i.	....	Girl	
94	2	11	7	3	15	v. l. o. i.	3	Girl	
95	3	13	2	5	20	do	5	Boy	
96	5	12	4	9	20	v. r. o. i.	3	B. 12 lb	Forceps.
97	2	9	2	5	15	v. l. o. i.	1	Girl	
98	1	13	7	3	25	do	4	Boy	
99	2	15	3	4	5	do	1	Boy	
100	3	18	..	..	30	....	....	Girl	Laber complete in 30 minutes from first pain.
101	2	9	..	7	5	v. l. o. i.	3	Girl	
102	1	12	6	4	20	do	2	Boy	
103	3	10	1 $\frac{1}{2}$	4	15	do	1	Boy	
104	2	13	3	7	20	v. r. o. i.	6	Boy	
105	5	18	1	4	5	v. l. o. i.	1 $\frac{1}{2}$	Girl	
106	1	8	11	3	25	do	8	Girl	
107	1	15	2	9	10	do	3	Boy	
108	2	10	13	1	25	do	....	Boy	
109	7	13	..	5	10	do	2	Boy	
110	3	11	1	4	20	do	1	Girl	
111	1	16	8	3	20	v. r. o. i.	5	Boy	
112	13	12	..	12	15	v. l. o. i.	2	Boy	Forceps. Great anterior obliquity of uterus.
113	3	9	3	1	25	do	....	Girl	
114	1	15	9	3	10	do	2 $\frac{1}{2}$	Girl	
115	2	13	4	1	10	do	1 $\frac{1}{2}$	Boy	
116	1	14	14	3	20	do	3	Boy	
117	1	10	4	6	10	do	4	Girl	
118	3	11	3	4	25	do	1	Girl	
119	4	12	1	4	20	v. r. o. i.	2	Boy	
120	1	9	10	7	15	v. l. o. i.	3	Boy	
121	3	14	3	2 $\frac{1}{2}$	20	do	1	Girl	
122	2	10	10	2	5	do	1	Girl	
123	2	11	4	2	10	do	1	Boy	
124	3	12	6	3	20	do	2	Boy	
125	2	13	7	4	15	do	3	Girl	
126	1	14	14	6	25	do	8	Girl	
127	3	10	4	2 $\frac{1}{2}$	10	do	2	Girl	Former labors over 24 hours.
128	2	13	7	4	15	do	1	Boy	
129	1	9	4	4	25	v. r. o. i.	3	Boy	

No. of Case.	No. of Pregnancy.	No. of Days Bella-donna was taken.	Hours 1st Stage.	Hours 2d Stage.	Minutes 3d Stage.	Presentation and Position.	Chloroform, No. of Hours.	Size and Weight of Child.	REMARKS.
130	3	12	..	2	5m.	v. l. o. i.	Girl	Labor completed in 45 minutes after the first pain.
131	2	14	1	3	20	do	1	Girl	
132	2	11	3	5	25	do	5	Boy	
133	1	14	6	2	15	v. r. o. i.	1½	Boy	
134	5	13	..	1½	5	v. l. o. i.	....	Boy
135	3	9	Boy	Former labors tedious.
136	1	12	3	4	25	v. l. o. i.	2	Girl	
137	3	15	6	1	5	do	1	Girl	
138	1	12	2	5	20	face, r.m.i.	....	Girl
139	2	10	6	6	5	v. l. o. i.	4		
140	3	13	4	1	15	do	½		Former labors tedious.
141	1	16	4	2	5	do	2		
142	1	9	9	4	20	v. r. o. i.	4	Girl	
143	1	14	3	3	20	v. l. o. i.	1	Girl	
144	3	13	5	3	10	do	....	Girl
145	4	12	2	3	5	do	2	Boy	Former labors tedious.
146	2	15	5	7	25	v. r. o. i.	5	Boy	
147	1	12	2	1	5	v. l. o. i.	1	Boy	

Frozen Parts—Frost-Bites. By R. NELSON, M.D., New York.

[Read before the N. Y. Medico-Chirurgical College, Dec. 27, 1860.]

This paper is not called for in this region of New York, where the cold is seldom sufficient to freeze people; but in the north and north-west it may be useful, as giving a rational statement of what ought and ought not to be done in cases of frost-bites. It was written last year, but not then published, owing to causes unnecessary to be mentioned. It was suggested by the following article, which appeared in the *N. Y. Herald* of December 30th, 1859, in which it is said that the weather was so cold at the time of the great fire, December 16th, 1835, that "*barrels of brandy and other spirits were kept beside the engines and emptied into the boxes to keep them from freezing. The firemen were compelled to put brandy into their boots to keep [their feet] them from freezing.*"

No doubt that the above statement is correct as to the use made of the spirits, but there the accuracy ends. Much knowledge, also error, is imbibed by the masses from newspapers. A statement, in *print*, is so potent, that it is believed and propagated as a truth, while the same statement made in *words* would be disregarded. On this account I notice the above extract to refute, not the fact, but the con-

elusions and the dangers likely to ensue from its application, especially since a large portion of people believe that, since spirits do not freeze, anything put into spirits, like it, will not freeze; but this is false.

Experiment.—Fill a flask with spirit—say whiskey, and place it in the air, the thermometer at 10 or 20° below 0, Fah.; next, fill two phials with water, well stoppered. Hang one phial in the air and one in the whiskey—this will happen: the water in both phials will freeze; the one in the air not so soon as the one in the spirit, because the spirit being at the same temperature as the atmosphere, and a denser body, will more quickly than the air absorb the caloric from the phial suspended in it, than the atmosphere will from the phial in it. The water in the phials will remain for a time transparent, because liquid, and when cooled down below freezing will suddenly grow milky-white, and in *an instant* after, the phials breaking, will become solid ice; because, up to the moment of freezing, the phials resisted that expansion without which the water could not solidify into ice. These physical facts are so evident, that it would be a waste of time to dwell longer on them. The masses are ignorant of these physical facts, and are confirmed in their error by such statements as the one above mentioned, and ought to be corrected. To show that this error has had at least one application within my own knowledge, I shall now mention one case.

Case 1.—Two gentlemen interested in land, went into the forest with a surveyor, to mark out a boundary. The day was moderately cold—about zero. This day's labor over, and having a bottle of brandy left, they poured a portion into their boots, under the idea of securing their feet from cold. They had an hour to *walk* before reaching a house, and this exercise preserved them; for had they ridden, undoubtedly they would have lost their feet.

Case 2.—A grocer had a number of puncheons of rum piled up in his yard in a very cold climate. He sent two of his clerks to tap one of them, which was done; but the hole having been bored too large for the cock they had with them, one thrust his thumb into the hole to stop it while the other run into the house for a suitable cock. In a minute, or a little over, he returned, and his companion withdrawing his thumb, found it white, senseless—frozen. The bone of the first and part of the second phalanx was frozen, and ultimately, was lost; for a frozen bone *never* recovers.

I might cite many more cases in illustration of the danger to be feared from spirits cooled to a *low* temperature, but which, however interesting, would extend this paper to too great a length.

What takes place when a Part freezes.—This ought to be understood before attempting to remedy the evil; and let us take the case of an ear. The cold air at first excites a biting pain, increased redness from afflux of blood invited by the pain; a while longer the pain diminishes, and the redness lessens—nearly disappears; all at once a sharp sting will ring, as it were, through the part, and as suddenly all pain will cease—it is frozen, is quite white, bloodless; innervation, circulation, and life have ceased in the part. Should the exposure continue, the freezing will extend, and the pain at the frozen limit will recede further and deeper. It is different for covered parts—as the fingers and toes; here the pain is less acute; there is rarely any preceding redness, nor is the moment of freezing announced by the sudden sting felt when it is an exposed part. When long continued, not only the soft parts, but also the bone, become involved. All these freezings necessarily proceed from without inwardly, and the thawing or recovery of the part ought to follow the reverse order, else destruction will ensue. The particles first frozen must be the last thawed; for, should the surface be thawed first, a frozen stratum will remain between it and the deep living structure, cutting off all communication of innervation, circulation, and life from below, leaving this imprudently thawed part isolated, and subject to the laws of dead matter already interfered with by the chemical and vesicular alteration which freezing induces. Therefore, the thawing must take place slowly from *within*, each particle, as it thaws, receiving such innervation as it is susceptible of—such amount of blood as the injured vessels will admit, particle by particle—and a dose of life from the nearest living atoms. This much said, we are now prepared for the treatment.

Treatment of Frost-Bites—Application of Snow.—A popular error exists—almost universal—that a frozen part is to be restored by rubbing it with snow. By this *rubbing* and *indiscriminate choice of snow*, two great errors are committed, each of which adds to the first injury.

First—Rubbing.—Its advocates may possibly say rubbing will set the blood in motion, and help to generate heat to thaw the part—false. A frozen part is a solidified one, and the blood usually there is now absent; but even if present, it could not be made to circulate until thawed; therefore, this first act is worse than useless, since it cannot effect the object intended. The juices that give pliancy and compressibility are frozen into minute crystals, more or less approximated. In this state, bending or compressing (the effect of rubbing) will produce innumerable small fractures in the tissue, which, on becoming thawed, will leave as many lesions, added to the one created

by the simple congelation; an accident sufficiently severe in itself. The friction cannot give fluidity to that which is solid, as is a frozen part, and by its alternate pressing and kneading, will produce mechanical interstitial damages.

The *second* error is the *indiscriminate quality of the snow*, as regards its temperature, and is a more serious one than that of friction. Frost-bites can scarcely happen at a less temperature than zero, or 30° to 25° below the freezing point, and snow at such a time must be at an equally low temperature. If snow so cold be applied, it cannot contribute caloric to thaw the frozen part, but must abstract caloric from it, and tend to either keep it frozen or freeze it deeper than it was before the application.

Case 3.—Two gentlemen driving in a very cold day, one of them froze the tip of his thumb; his companion told him to rub it with snow. He drew his thumb out of the mitten, and with the other hand (a mitten on) picked up the cold snow from the roadside, which he vigorously rubbed on his thumb, but it would not thaw! with this infallible remedy. He continued to repeat the dose as they rode along, and the thumb continued to freeze more and more; at last an acquaintance met them, and apprised them of the error they were committing; but too late, for already had the first and part of the second phalanx frozen, bones and all, to the ultimate inevitable loss of the limb. The day was cold, below zero, and the temperature of the top snow the same, of course. Since the tip of the thumb froze through the mitten, it would have taken little reflection to know that snow as cold as the air that froze through the mitten, when immediately applied would surely freeze the part more. But who is there that reflects or reasons on a dogma? It is accepted as a matter of course, and the more readily when it is incomprehensible.

Another Case, 4, a contrast to the foregoing.—Two gentlemen riding side-by-side in extremely cold weather, well muffled up. One of them had his cheek slightly exposed to a blast that blew under the peak of his cap. He felt the sudden sting that precedes, or rather accompanies freezing, and well knew what had happened, and what to do, for he was a reflecting man. The driver, looking round, apprised him that his cheek was nipped—never mind, drive on, was his reply. All he did was to crouch his face a little lower into his shawl, for it was too cold to raise his arm and hand from the tucking in. He trusted to the shelter he now got, and the rising heat from his body, to *slowly* restore the part. The road took a turn and the wind ceased to scathe the frozen cheek, which now *gradually* thawed by

the ascending heat from his body. In a little time the cheek began to smart; to remedy this he contrived to expose his cheek to a little more air, and so cooled off the rising reaction and too rapid thawing. When he reached the halting-place an hour after all was well, only a little tender, to the surprise of his companion and the driver, who could not conceive how a frost-bite could be recovered from without having recourse to the inevitable rubbing and snow.

It is easy, now, to perceive how a frozen part is to be thawed. It must be borne in mind that the particles last frozen are those which must be first permitted to recover, and prevent the next outward layer from doing so until the inner one has, which can only be done by retarding the thaw of the outside. How is this to be done?

By applying such a degree of cold as will not increase the freezing, at the same time prevent it from thawing until it is reached by the natural thawing from within outwardly. This object is easily attained; for where frost-bites happen there is at hand either snow, ice, or frozen earth. When the weather is very cold the snow or ice will be nearly of the same low temperature— 10° , 20° , 30° below zero, Fah. Such snow is too cold; it will freeze the part more than it was before its application. But it is easy to get warmer, or less cold snow—snow of a suitable temperature—such as will not additionally freeze. This suitable temperature is barely the freezing point, 32° above zero of Fahrenheit. It is easy to raise the temperature of snow, however cold, to this degree, by simply putting a few handfuls into a basin of water, which will instantly bring it to the temperature needed. When there is no snow or ice, frozen earth may be substituted. The water will be brought to 32° , the exact point to permit slow thawing from *within*, as already mentioned. If it be the fingers or toes that are attacked, immerse them in a basin full of this slushy snow, ice, or mud water; should it be an ear, or nose, or cheek, apply this water by means of a napkin, frequently dipping it so as to keep it at this barely freezing (or thawing) temperature, until color and softness return to the part. After that, less cold water may be used, so as to keep down the inflammatory congestion that is likely to follow. While this slow process of thawing is being effected, avoid that rubbing and kneading, the error of which has already been noticed. When the part has thawed, and is not dead, the epidermis will often blister like a scald. Prick these blebs, as they form, and dress with *basilicon* rather than with cerates, and exclude the air and light, since these increase the inflammatory state.

When the congelation has penetrated deep, the part will slough,

however judiciously it may have been thawed. Should the freezing have reached a bone, as a phalanx, even slightly, it will never recover, (as in case 2.)

Case 5.—A young man, a carpenter, unacquainted with the *feeling* of intense cold, this being his first winter in a severe climate, left his work to go to his dinner at a short distance, carrying in one bare hand a jack-plane, in the other a hand-saw, both dense wood and good conductors. On entering his house he found the tips of his fingers nipped and white. His wife applied the popular remedy, which this day was very cold, dry snow. She *rubbed* his fingers assiduously, until the white and the frost extended to his knuckles, and desisted only when her own began to be nipped. Two days after he called on me; his fingers now looked like as many black sticks, and becoming dry. In a month more they separated from the palms, leaving him fingerless of both hands. The poor young wife, in giving an account of the affair, dwelt emphatically on her diligence in rubbing the snow, saying that the more she rubbed the more his fingers froze. Had this popular error not existed, or had she known the difference between *cold* and *warm* snow, she would have used her own common sense, and saved, instead of destroyed, her husband's fingers.

Case 6.—A man 50 years of age froze all his toes. They were thawed *populariter*; but in two days the soft parts became black, then dry. In six or eight weeks they began to fall off at the metatarsi; also the heads of these bones. After several months of suffering a thin shiny cicatrix covered the stumps, but the pain continued, because the remaining bones were struggling with slow disorganization. An inch long of each metatarsus was amputated; this was followed by instant cessation from pain, followed by a good cure.

When the whole frozen portion of bone does not separate, or when a bone is only slightly touched, the investing tissues may recover, but most likely will remain swollen by congestion and a languid inflammation; while the bone beneath will undergo a great and slow change, losing its hardness, the lime gradually wasting away, leaving it with a soft, semi-cartilaginous, yellowish look, and will never recover.

Case 7.—A party of infantry was sent on a march of two days in the winter of 1813. On the second day they returned to quarters, some of them on two or three sleighs, so exposed that there were several frozen toes. One man, after the great-toe thawed, the epidermis blistered, and the nail came off; new epidermis formed, also a sickly nail, from the edges of which oozed a foetid, watery fluid. The flesh remained swollen, purple red, and a continuous aching persisted

for nearly a year, relieved by amputation only. The bone was softened, and diaphanous in several places, like a bone macerated in acid; in other parts it was dead and carious. Another man had to lose two of his toes thirteen months after the accident; in his case the phalanges were similarly affected.

Case 8.—A man about 35 years of age, looking haggard from continued aching pain in the great-toe. He had applied various medicaments without benefit, and taken the advice of several practitioners, whom he thought did not understand the case. He called on me in August, and at the first glimpse of the toe, being familiar with such cases, I told him, to his surprise, that his toe had been frosted. At first he could not credit my statement: he had never been frost-bitten. But on reflection he remembered he had been out a couple of days in the snow in the winter-time on the Sierra Nevada, and that the pain dated from that time. No doubt the toe had thawed in his marchings, and when he came to encampment the frost-bite was not noticed as such at the time. The toe was removed, with a portion of the metatarsus; the phalanges were softened in some places to a thick or very consistent jelly, caries in other portions, no pus anywhere. The soft parts were similar to cases 7 and 8.

Great Chilling from Falling into Winter Water.—Not unfrequently, it happens in traveling on the ice that the horse and sleigh break through a weak or lately frozen part. As regards the horse, when rescued, he quickly *shakes* off the excess of water, and in five or ten minutes' smart driving, he begins to steam, and is warm enough to escape injury. The same for man, since there is neither time, place, nor means to change wet for dry clothing; and could this be done, it would prove injurious by the time consumed and the exposure. All that need be done is to make a quick squeeze or rub-down to press the excess of water out of his clothes; that done, like the horse, set to running as briskly as he can, but not ride. This exercise will be difficult for a few steps at first, but will soon succeed. If the weather is cold, his outward clothing will soon stiffen and freeze, and protect that which is under from further cooling by the air, while that next his person will warm from the heat of his body, generated by the exercise. If he reach a house in half an hour he will be safer than if he reached one in five minutes; for, when a person so immersed is immediately changed in a house, he is heated almost in vain from *without*—he will, in this case, continue chilly for several days after on the least exposure, even in a house; but if

warmed from within outwardly, by exercise, he may then be changed, and escape future accidents, congestions, &c.

Case 9.—Two little boys playing on the ice of a pond, broke through; the accident was seen, and they were soon rescued. One boy, the richer one, was carried into his father's house near by, shivering, trembling, blue mottled, quickly stripped and plunged into the bedroom warm bath. This boy felt cold for several days after, shivering when the door was opened, though in a warm house. The poor boy was taken charge of by a laboring man who ran to the rescue, took the little fellow by the wrist, dragging and running him along a considerable distance, to his father's house. On his withdrawal from the pond, the man quickly rubbed him down and the water out of his clothes. By the time he reached his house, his outward clothing began to freeze, but the boy had already through the exercise recovered from the chill; his clothes were now changed for dry, and he experienced no subsequent tenderness from cold as the other boy did. In these cases it might be beneficial to take a *little* alcoholic liquor once; but I am not certain that it would prove as beneficial as some people suppose.

Freezing to death—the whole person.—I have personal knowledge of many instances of persons being frozen to death. It is astonishing in how short a time a man will freeze to death—in an hour, even in less time. I shall mention a few cases only out of many.

What physiologically takes place when a man freezes to death, is nowhere accurately described that I know of. It is commonly stated that there is a great tendency to sleep, which must be resisted, else death will follow, as if sleep *of itself* was the dangerous thing. No doubt sleep, or an exhaustion resembling sleep, overtakes a person chilled through, and should he give way to repose, and not carry on that exercise which generates caloric, would cool more and more down unto death, and then freeze. A man frozen to death cannot describe what his feelings were; but there are many persons to be met with in rigorous climates who have been on the brink of perishing in this way, and from these, by proper inquiries and my personal experience, the facts are easily ascertained.

What does take place is—the person is generally fatigued and hungry; commences to cool down in the limbs and surface first; the blood returning thence, diminishes the temperature of the interior blood with which it mixes, pulse after pulse.

Proof.—Thirty years since, when it was the fashion to bleed for accidents, the blood from a cold arm and hand escaping from the basilic

vein might be found at 50° or less. Who has not often experienced, when riding in a cold day, the face very cold, the parotid fluid trickling in cold gushes over his second superior molar tooth? The external blood, then, is much colder than natural. This constantly returning cold blood tends to reduce the temperature of the whole mass, cooling the interior. The pulse diminishes in volume, becomes thready, almost ceases; listlessness like sleep comes on, insensibility follows, breathing ceases—death. Then it is that the body freezes in a short time, for the interior as well as the exterior require but a few degrees more reduction to become solidified. These facts are of frequent occurrence in cold climates, and escape notice by the ignorant mass; but intelligent and reasoning persons perceive them, and know them well.

Case 10.—A farmer about 50 years of age left home early in the morning with hay to be sold in the market, and did not sell his load until late in the afternoon of a cold day, about 10° below zero. All day he eat nothing, took no exercise to keep himself warm. He gradually cooled down, and of course, his clothing. He got into his sleigh, sat down in the bottom, with his back to his horse, a common practice, and followed in a long line of returning market sleighs on his way home. His horse being under no control, lagged slowly along, arresting the progress of those behind; this induced one of the hindmost travelers to run forward to whip up that horse, when he found the sitting man dead, stiff, frozen. This had occurred in less than an hour after starting.

Case 11.—A man about 56 years of age was seen to leave a poor house about 9 o'clock in the evening. He sat down in his sleigh and gave his horse, a poor, sorry one, his own way. The night was very cold— 20° below zero. At that time I passed him on professional business a few miles into the country. On my return, my driver called to me, saying, there is the old white horse we passed, outside of the road in the hollow, (where the wind had swept the snow away near a house.) We stopped, found the poor man sitting, dead, his arms and legs frozen stiff. All this passed in one hour's time. I could relate many more such occurrences, and more interesting in the circumstances, but the description of which would be too lengthy for this article.

I hope this paper will tend to correct the erroneous belief in RUBBING with COLD SNOW a frost-bitten part; and induce some people to reflect on the *reason why* they do a thing, and not accept a doctrine because it is incomprehensible, and who believe it because it is marvelous—"The hair of the dog is good for its bite."

I have written this imperfect sketch because I am not aware of any surgical book that treats of these accidents. There is a *sensation* notice on frost by Baron Larrey, in his account of the great retreat from Moscow. He there deliberately states that the *first part* of those unfortunate fugitives that froze was the eyes! This absurdity I should not notice were it not from the quarter it comes, and having heard people repeat it, and believe it, because it is in PRINT, and is marvelous. The Baron neglected in his romance to mention how these men managed to keep on the march with frozen eyes. I doubt much whether he once got out of his flying sleigh, well wrapped in robes and furs, in his hurry to escape from the white bears, to examine and prescribe for these frozen eyes. But many people take as true all that is said by this hero of broad-sword and red-hot-iron surgery, who has slain more men than he has saved; remorselessly tortured with fire more sufferers than he has assuaged; and by his example and great name led blind followers to imitate and repeat his cruelty and inhumanity. I knew him!

A few Thoughts on the Importance of Prophylactic Treatment in the Prevention of the Decay of Human Teeth. By ABR. ROBERTSON, D.D.S., M.D., Wheeling, Va.

Perfect teeth are so important to the life, health, comfort, and beauty of the human organization, that it cannot escape the observation of any one, whether professional man or layman. So fully is this fact recognized, that within a few years past, a host of several thousand men in this country alone, have risen up and professedly devoted themselves to the care, preservation, restoration, and artificial supply of these important organs. And they sustain three colleges and two or three times that number of journals devoted to the instruction of men, and of disseminating knowledge in this art, which they claim to be a branch of the "healing art."

Hitherto dentists have almost exclusively devoted their efforts and attention to arresting the decay in teeth, where it has already commenced, by filling and other operations, and of supplying the places of those already lost by artificial substitutes. But those who have observed most, and who have considered and studied the subject most carefully, are fast becoming convinced that such treatment is not sufficient; that operations on the teeth alone cannot fulfill the desired object. Operations cannot preserve the teeth in their original integrity, beauty and usefulness.

True, they can do much to preserve, and retain and restore to usefulness, teeth that have been partially, and even to a very great extent, destroyed by decay. Anything that has been repaired is not a perfect thing. Teeth that have been filled, and especially that have been filed, are always more or less defaced. Therefore, for the perfect object desired, preventive rather than reparative treatment is required.

But as dentists usually do not, and ought not, pretend to practice general medicine, and therefore have not the opportunity to apply the necessary prophylactic treatment; and as physicians do not, and from want of time and other circumstances generally cannot, and ought not to practice dentistry, a mutual obligation to the community, and to each other, rests on both physicians and dentists in this regard.

Physicians ought to be better prepared (and here I wish to disclaim all intention of invidiousness or reflection upon the medical profession; but I have heard some very eminent medical gentlemen say, with great complacency, "I know nothing about the diseases of the teeth,") to determine what teeth are capable of being preserved by dental operations; and they ought, too, when they observe the teeth of their patients wanting such operations, to recommend them to some good dentist, in whose integrity, judgment, and skill they have confidence. They should be prepared, too, to judge whether a dentist has the requisite qualifications to entitle him to such confidence. Promptness in giving, and urging such advice, if need be, is also important, for the success of such operations depends much on their being performed in time. And it is especially important that physicians, and more particularly country physicians, who are obliged to extract teeth, should be so qualified as to know when a tooth ought to be extracted and when not; for, for want of such knowledge, many useful and perfectly sound teeth have been extracted, sacrificed, because the patient wished it done, under the false impression that the tooth offended, when the pain, or at least the cause of the pain, was in some other tooth or part.

Dentists should also have much more knowledge of the general principles of medicine and surgery than many—most of them—possess; that they may know what cases require general as well as special treatment; and when general treatment is necessary, recommend their patients to the care of their family physician, or other proper medical advisers.

Preservation is the province and duty of the physician; *restoration* that of the dentist. But how shall physicians prevent the decay and subsequent loss of the teeth of their patients? As already intimated,

by prophylactics. When and how shall these be applied? Doubtless it may be done in many ways and at many times, but my present purpose is simply to call attention to one or two particulars, which seem to me to be pre-eminently important and plain, and which are of almost universal application. And here I will premise by saying that if the physician is called to a patient suffering from any disease, and has so treated him as to save his life, to restore his general health, to relieve him of his present suffering, he may have—he has—done a great good; but if he have, by any neglect or oversight, left him in such a state as in after life to be annoyed by pains and sufferings that might have been avoided, he has not done all the good he might have done, or that it was his duty to do.

It is almost a universal impression among mankind (at least in this country) that medicines injure the teeth—that they cause their decay.

Dentists almost daily hear remarks like this, and from all classes of people: "My teeth were perfectly sound until I was sick, and then I took so much medicine that it ruined them." A belief so universal as this never originates without some foundation, but still it is by no means certain that the conclusions are either correct or philosophical, and in the matter now under consideration, they are almost always wrong. Medicines but rarely injure the teeth. But few medicines, under any circumstances, can injure them. But that the teeth often decay more during and after sickness than before; that they often commence to show signs of decay, and even to give their possessors trouble immediately after a spell of sickness, is most unquestionably true, and for the plainest reason.

The secretions of the mouth in their normal state are alkaline, the buccal mucus being slightly acid, while the secretions of the glands of the mouth—the saliva proper—which is by far the most abundant secretion, is alkaline. Decay of the teeth is caused by agents acting upon them chemically.

Most, if not all diseases, more or less change the character of all the secretions. The secretions of the mouth are changed from an alkaline to an acid reaction by many diseases, as gout, rheumatism, fevers, cachexias, &c., and especially by inflammation of the stomach and alimentary canal, and indigestion. This effect is sometimes produced by suppressing the glandular secretions, and thus letting the acid mucus predominate; but more commonly by changing these secretions from alkaline to acid. While this altered state of the secretions continues, the teeth are constantly exposed to a bath, weaker or stronger, of acid, the only agent that is capable of injuring

them, that is ever likely to come in contact with them while in the mouth. This acts upon them chemically and constantly; and this I am satisfied—not only from the general belief that medicines injure the teeth, (though from what has already been said it is clear that proper medicines properly administered, that is, so administered as to restore these altered secretions, protect instead of injuring these organs,) induced by the observation that the teeth so generally fall into decay after the occasion for taking medicines—after “a spell of sickness”—but from many years’ experience and observation in the cure and treatment of the teeth—is *the great* cause of their decay. True the continued use of acids, and especially of the mineral acids given as medicines, and also the topical use of such salts as have less affinity for their acid bases than has the lime of the teeth, sometimes effect sad ravages in these organs.

From the foregoing remarks it seems to me plain what course should be pursued; what is the only course to preserve the teeth of the community in their original integrity; or, at least, the course that will do much, very much, towards securing that most to be desired result.

First, that whenever a patient comes under the treatment or care of a physician, he should not only seek to restore health by restoring the secretions to their normal condition; but that he should carefully observe and satisfy himself by suitable tests, of which litmus paper is perhaps the most convenient, whether the secretions of the mouth are acid; and if so, take care to protect the teeth and other parts from its injurious effects while that condition lasts, by prescribing the frequent use of such antacid, or stimulating gargles, or washes, as shall most effectually counteract or prevent its action on the teeth, as well as to direct that they be kept as free as possible from all accumulations as might, by neglect, ferment and become acid in the mouth.

And second, when acids, or salts whose acids have stronger affinities for lime than for their own constituents, are exhibited, by directing that they be taken through tubes so as to prevent their contact with the teeth, or by immediately following their exhibition by some antacid wash, as solution of the carb. sodæ. Both might be but a prudent precaution.

If this course were generally adopted by physicians, and more especially if the community generally were instructed in the importance of such precautions, I am well assured that we should cease to hear such sad complaints of the bad effects of medicines on the teeth; and that a vast amount of expense, discomfort, pain and deformity would be avoided.

Hernia and its Treatment by Trusses. By J. W. RIGGS, M.D.,
New York.

Whatever may be the final verdict of the profession as regards the various *surgical operations* which have been practiced for the radical cure of hernia, it is sufficiently obvious that the *Truss* must ever maintain an important rank among the remedial agents employed in the treatment of the disease. It is believed, moreover, that the day will come when the timely application of a suitable Truss, and the necessary attention of a competent surgeon, will be found to supersede all operations for its relief, except in very rare instances of strangulation.

If, then, the Truss is to be our chief dependence, it is eminently proper to inquire as to its fitness for so important a purpose. Not only proper is it to discuss this subject, but there is in every community an inappreciable interest which demands of the profession, as the conservators of the public health, a thorough investigation of every agency which may be made available for relief from this distressing infirmity.

Not a town, scarce a hamlet in the world, that does not contain its victims; and here the question arises, whether physicians, from their inattention and apparent indifference to the subject, may not justly be held responsible in a good degree, if not for its universal prevalence, for at least a large share of the remediless injury and life-long suffering so naturally and inevitably resulting from the unskillful and most vicious treatment to which the disease is so often subjected.

To impute to physicians a frigid indifference or even the slightest lack of sympathy towards the afflicted, would be manifest injustice. Men whose lives are characterized by the noblest acts of benevolence, and whose predominant purpose and unselfish aim is to relieve human suffering, are least of all men obnoxious to such a charge. Nevertheless, there is resting somewhere a fearful responsibility, and the conviction forced upon the mind long since is gaining strength with every day's observation, that if hernia had received but a small share of the attention it deserves, and which has been so zealously and successfully devoted to every other disease, it would now be comparatively rare, and trivial in its character, instead of being found in every household, and so often in its most aggravated and irremediable form.

However easy to explain, it is believed to be very difficult to justify the utter neglect by the profession of hygienic interests so vast and so important to the world; interests, too, whose very nature precludes all hope of their proper protection and preservation, without that

knowledge and that experience which can be acquired only by the practicing physician.

All other diseases are supposed to come legitimately and exclusively under the supervision of those more or less thoroughly versed in all that pertains to the healing art, and hence their treatment is conducted upon certain well-known principles and immutable laws, the strictest observance of which is deemed essential to success, and for the violation of which the practitioner is justly culpable. Whilst hernia, on the contrary, the most common as well as most rebellious to treatment of all diseases, is left by common consent, as it were, either to the resources of the patient himself or of his neighboring mechanic, having no knowledge of the various organs and structures involved, nor of the laws of cure, and hence is treated, as might be expected, with neither principle to guide, nor law to govern in the application of the (so called) remedy employed.

The idea simply of an *opposing force* to prevent protrusion of the bowels appears to have been the only indication, and to secure this object, regardless of all else, has apparently been the thing aimed at in the construction of trusses; and even this, for obvious reasons, has proved a most signal failure.

It is not difficult, therefore, to understand why trusses, as regards their principles and operation, have not been essentially improved—neither will the statement seem an exaggeration to the surgeon who will take the trouble to think on this subject, still less to him who, by careful observation, will familiarize himself with their practical working and effects—that there is more suffering from *hernia and its concomitants* than would be if trusses were unknown to the world. It is not intended to underrate the good that has been accomplished by these instruments. Instances are numerous where the greatest benefits have been derived from their use, and cases are not wanting in which radical cures have been effected. In deciding upon the merits of a remedy for disease, however, the intelligent surgeon will not be guided by results in isolated cases; and though it could be shown even that a given plan of treatment produced favorable results in many instances and with considerable uniformity; still it would only be in keeping with that commendable spirit of inquiry which so characterizes the profession of the present day, to ascertain whether such treatment, however successful and popular, could not be further improved.

But should it appear, on the other hand, that the means employed *failed, as a general rule*, to accomplish its objects, and besides, that they very often proved the *certain cause of evil*, then most clearly it

becomes the imperative duty of those whose province it is, to endeavor on the one hand to enhance the good results, and on the other to diminish the evils. Such is the case with hernia. Its treatment is anything but satisfactory; the truss not only fails of its object, but its use too often aggravates the disease, besides causing other injuries much to be deplored, and which no human agency can relieve.

It is stated above that trusses have never been essentially improved. "Hull's Truss," so widely and favorably known, underwent a modification of form very early in its history, by changing its previously *convex* to its present slightly *concave* surface. This alteration, which in some respects is a decided improvement, was first suggested and urged upon its inventor (the late Dr. Hull) by the venerable Mott; and in view of the incalculable benefits conferred by this change, though regarded as trivial by some, and even objectionable by others, it deserves to rank high among the many brilliant achievements of this justly distinguished surgeon.

The reader is aware, that in his notes to "Cooper's Dictionary," under the head of "Hernia," and again under that of "Truss," the learned Reese also advocates the concave pad, setting forth its advantages and importance in the most forcible and conclusive manner. On this subject, the professor very justly remarks: "It is no marvel that so few radical cures were ever known by the truss when the convex pad of the instrument was fitted to the mouth of the rupture, thus enlarging the hernial opening." If evidence were wanted to show that the profession have entirely ignored this subject, practically considered, it is found in the fact, that the foregoing unequivocal testimony of Dr. Reese as to the unfitness of the convex truss for the purpose intended, has been upon record in the pages of a popular text-book so many years, apparently unnoticed. Such language concerning the only popular remedy for *any other disease*, however rare, could not have failed to elicit discussion as well as action by medical men.

It is not to be inferred that the convex pad, in order to act injuriously in the manner alleged by the Professor, must be literally "fitted to the mouth of the rupture;" nor is it to be supposed that the evil alluded to is confined wholly to truss-pads of the smallest dimensions and most conical in form. It is true that, from their size as well as form, these are best adapted to "thus enlarging the hernial opening;" and that they accomplish this natural and perfectly legitimate result most speedily and with greater certainty, does not admit of a doubt.

The most mischievous results, however, are not unfrequently produced by the larger instruments; and from their greater liability to

impinge the cord, as well as from the greater loss of tissue by absorption which they so often occasion, it is very questionable (as trusses are used the world over, without regard to fitness in any respect,) whether the semi-spheroidal, ovoid, and pear-shaped pads of ordinary size, all of which are so extensively used, are not more than all others to be deprecated.

Injurious as these instruments undoubtedly are, it must be admitted that, in competent hands, they would be far less so. Moreover, cases of rupture are seen, now and then, where the indications are best fulfilled by the application (for a time) of a small and slightly convex truss-pad. These, however, are cases where, usually, the hernia has existed for a considerable time, and been subjected to the action of the conical truss until, in consequence of the scooping out of the tissues adjacent to the rupture, the continuance of an instrument with its centre more or less prominent or elevated becomes a seeming necessity in order to retain the viscera. By skillful management and careful attention, however, in ordinary cases of this description, these difficulties may be so far overcome as to admit of the application of an instrument which cannot do further injury, not only, but which, with care and perseverance, sometimes result in the radical cure of the disease.

Though absorption of tissue to some extent is one of the inevitable effects of trusses, the amount of substance thus lost depends very much upon the size and form of the instrument employed, and the degree of pressure exerted by the spring; and those who have witnessed these effects of the ordinary convex pads need no further evidence of the injury thus occasioned, particularly when long worn, and with the pressure which, under such circumstances, usually becomes requisite for the retention of the viscera.

Compression of the vessels of the spermatic cord, and consequent atrophy of the organs they are designed to nourish, is another evil incident to the use of the convex truss. Though this has been mentioned as a possible event, to be guarded against in the treatment of hernia, we have not seen it noticed by authors as an actual occurrence, or as being very likely to happen from the use of trusses. Such, however, is known to be the fact, and with a frequency and to an extent of which it is believed physicians have no just conceptions.

The difficulty, amounting in many cases to an impossibility almost, of keeping the ordinary convex pad from contact with, and projecting more or less over, the pubes, must have been observed by every one. Looking now at the exposed situation of the cord, from the moment

of its emergence from the abdominal ring, the great danger of its impingement and liability to injury must be perfectly manifest; and that many *are thus injured* for life, is far less marvelous than that so many escape. That a very large majority of persons wearing this kind of instrument are not seriously affected in the manner stated, is believed to be owing to the following causes:

In some cases of rupture, moderate pressure only is exerted, which does not arrest the blood in the artery. In others, where greater force is employed, and when, otherwise, they would suffer more or less, a liberal deposit of fatty tissue at this point affords partial, and for a while perhaps complete, protection; and lastly, the instrument, usually, is removed at night—thus giving play to those silent, but mighty, recuperative forces with which (so fortunately for our race) the human system is endowed; so that, in this “irrepressible conflict,” many times of years, between nature on the one hand and art (?) on the other, it is not wonderful that the former should *sometimes* triumph, as she has so many times before, even over instruments of steel.

To these causes, and these only, do all men, wearing the ordinary convex truss *overlapping the pubes*, owe their exemption from either partial or complete emasculation. Is it urged that there is no necessity for wearing the instrument as described? Whether avoidable or not, it suffices present purposes, that the evil will be perpetuated, doubtless, until physicians shall regard it of sufficient importance to admonish those who are (*or certainly ought to be*) under their care, of the impending danger, and enlighten them as to the means of escape.

It is to the want of such hints and just such instructions from this, the only legitimate source, that much of the suffering and remediless injury consequent upon *hernia* and *its treatment* is justly attributable. But that it is often impracticable to prevent impingement of the cord, as mentioned, is by no means difficult to comprehend. It is well known that, except in the slightest cases, *ruptures cannot be controlled by this pad with its apex sufficiently raised above the ring for the pad to clear the bone*; the slightest effort forces the viscera out beneath its beveled edge, and especially if the pad is attached to the spring by the universal joint, as first introduced in London by Salmon & Ody, and since to a considerable extent by others in this country.

Again, in corpulent persons, with rigid abdominal walls, (conditions which usually coexist,) this tendency of the instrument to rest upon the pubes has never yet been successfully resisted; and in all cases of this description it is quite obvious that the forms of pad last

above mentioned are peculiarly obnoxious, and never should be employed without the greatest caution, and only by those who have been apprised of the consequences that may ensue.

True, with any considerable rotundity of abdomen, is found usually not only the fully-developed muscle, but also a liberal supply of adipose tissue, which here serves, as before stated, to protect the cord at least for a time. It is here to be observed, however, that under the average pressure of truss-springs, this cellular substance with the overlying integuments, as well as the muscle beneath, (so far as it is acted upon by the instrument,) become so attenuated as no longer to afford the slightest protection to the cord; and exposed as these vessels now are for months and years to the direct action of the truss-pad, *anteriorly*, and rendered more than doubly effective by a corresponding counter-pressure by the bone, *posteriorly*, the idea of their escaping injury cannot for a moment be entertained.

But admitting even, that the instrument may rest upon the pubes without injury, which, however, it cannot, even then, the benefits derived are temporary only; in other words, of a negative character, and are sooner or later more than counterbalanced by a positive evil of a very serious nature. The inguinal canal in this case, instead of being supported and closed by the instrument throughout its length, as, if possible, it always should be, is merely dammed across or obstructed at its outlet, thus permitting the viscera to occupy, overstretch, and drag down all its upper portion, until the canal is entirely obliterated and the simple *oblique* is converted into the unmanageable and irremediable *direct* hernia. This, as is well known, is the usual condition of old ruptures; and that it is brought about in the manner here described, there is every reason to believe.

Surgeons who have given the treatment of hernia by trusses the least attention, are aware, as is every ruptured man, how easy it is, even in the worst cases, to prevent the escape of the bowel by very slight pressure, comparatively, by the ends of the fingers properly placed upon the parts—a fact, moreover, which explains itself. Hence, upon the same principle, the *smaller pads*, especially when applied with that nice discrimination as to force, *the importance of which cannot be over-estimated*, are far less capable of bad results than are the ordinary instruments above noticed.

Hernia, like other surgical diseases as well as injuries, never presents itself for treatment with barely one single indication to be met; there are in all cases several of more or less importance, and these ever varying with different patients, and even in the same case, from

time to time during its progress; and it will not be denied that the best interests of the patient demand that all these be duly considered.

It should be impressed upon the reader, and is therefore repeated here, that in the treatment of this malady, the amount of pressure by the instrument is of paramount importance, and demands special attention and the wisest discrimination. Take, for instance, the thin-walled and flabby abdomen, so ready to recede upon the application of the slightest external force; apply here an instrument of only the average strength of truss-springs with the small conical pad attached, and no one *ought* to be disappointed at a result so natural as that of enlargement of the hernial apertures.

Instruments of this description, especially in subjects like the above, *may be kept above the bone* for the most part, and hence their action upon the weak and yielding parietes is not restrained or opposed, as in the case of larger pads, by pressure against the pubes; and therefore, it will be seen that, with the entire force of the spring brought to a point, and bearing directly upon the rupture—these tissues yielding alike, as they do in all directions from the apex of the truss-pad—the effect above noticed is a foregone conclusion. In vain would different results challenge explanation. And yet, in another class of cases, and under different circumstances, presently to be explained, this same instrument sometimes accomplishes far better results—even a radical cure of the disease.

In cases like those mentioned, where the small pad works so injuriously by distending the hernial passage, the ordinary instrument and those of larger dimensions are, *in this respect*, far less hurtful. On the other hand, however, as regards the disastrous effects of pressure upon the *vessels* of the spermatic cord, they are much more to be dreaded, because of the impossibility of retaining the rupture, and at the same time avoiding these vessels.

Nearly all trusses now in use to any considerable extent, are essentially convex in their elements. “Hull’s Truss,” with a limited number of others of similar form, and the “Multipedal Truss,” introduced in this city some three years since, are believed to constitute the principal exceptions.

That the instrument of *concave* form, so far as regards loss of tissue by absorption and “enlarging the hernial opening,” possesses decided advantages over those of *convex* or conical shape, is a self-evident proposition; and it may here be stated, that a careful examination of a large number of cases in which the concave truss had been worn for

years, has failed to reveal the last-mentioned evil in a very marked degree, in a single instance. Nor is this at all strange.

As regards interference with the circulation in the spermatic vessels, however, they are by no means less obnoxious than the ordinary convex truss-pad, the ridge or elevation traversing the margin of the *concave pad* rendering them peculiarly liable to operate injuriously in the manner alleged, and even more so, it is believed, than the ordinary instruments, which are more or less convex in form.

That trusses do not fulfill the indications for which they are designed in a satisfactory manner, is not a new idea. The profession always and everywhere have had to lament their defects, while the victims of hernia, from sad experience, have learned to deprecate and deplore them. Universally admitted, though it be, that these instruments fall short of their intended purpose—apparent as it must be also to every one that they are many times injurious in their effects—yet the precise nature of these defects and their consequences have never been fully pointed out; or if they have been, they have failed most signally, and not less strangely, to attract the attention of medical men.

It is perfectly natural and perhaps proper, if not necessary, that different theories should prevail regarding the action and adaptation to disease of certain *medicinal* agents, and for obvious reasons it is not always easy to harmonize such conflicting views. But as relates to *trusses* and most other mechanical appliances, the same reasons do not exist for any great diversity of opinion.

In a case of fracture, for example, every surgeon very properly considers himself competent to judge of the fitness of the dressings he employs—at all events, *experience teaches, in this case*, a just appreciation of his remedy, and if for every good result he is menaced by a score or more of crooked limbs and false joints, he is by no means slow to seek out and remedy the evil. So, also, in the disease under consideration, there is no more difficulty in determining whether the instrument employed fulfills the indications of treatment properly, and whether results are satisfactory or otherwise, than there is in deciding like questions in the simplest case of fractured bone. And it may here be remarked, that if all the accidents and injuries of this nature were ignored and entirely overlooked by the profession, the consequent suffering could scarcely compare, in the aggregate, with what is now and ever has been experienced by the legion of ruptured persons, solely from want of such advice and such service as medical men only are or can be competent to render.

In view of the different varieties of hernia and the peculiarities of individual cases so constantly manifested, it is a noteworthy fact, and highly significant of the evils alluded to, that, with very rare exceptions, the truss is the same stereotyped instrument—essentially so—the world over. Add to this, that trusses are distributed broadcast over the land, and applied indiscriminately by everybody, (excepting those only who may justly be considered competent,) and the proof becomes at once conclusive and irresistible that the prevailing sentiment as regards the treatment of this disease needs to be corrected.

Though it is impossible to devise an instrument well suited to the different species of hernia—or to every case of the same variety—or even, perhaps, to the same case throughout its progress—yet there are believed to be *faults* which may be avoided, as well as *principles which should be observed*, in the construction of all instruments of this kind.

Of the nature of these *faults* and *principles* the reader is already aware, and until further experience shall demonstrate the contrary, it will be assumed that the *former* are wholly avoided and the *latter* amply secured in the “Multipedal Truss,” before mentioned, and which here claims to be briefly noticed.

As its name implies, the rupture pad of this instrument is provided with several separate and distinct bearings, so that the pressure is exerted at *intervals contiguous to* (instead of *directly over*) the hernial passage. By this arrangement, it will be seen, are gained the following advantages:

The knobs of the instrument imbed themselves in the tissues and render it immovable. Pressure thus applied necessarily corrugates the parts and approximates the openings. Whatever of tissue may be lost by absorption underneath the feet of the pad, is more than compensated for by a *positive increase of tissue* in the interspaces, consequent upon the hypernutrition always caused and maintained by the instrument. The viscera are much more effectually retained, and with far less force, from the spring. The circulation in the spermatic vessels remains unimpeded, because this instrument is far less liable to displacement not only, but if placed upon the bone, the cord cannot be confined under any one of the nodules; and moreover, if it could be thus compressed, no patient would long submit to the discomforts which would thus be occasioned.

Radical Cure of Hernia by the Truss.—Before leaving this subject, it is proposed to discuss the question briefly—*How does the Truss cure Hernia?* The popular theory as to the *modus operandi* of the truss in

the cure of the disease, is, "it excites inflammation in, and thus closes the neck of; the hernial sac."

If dissections of these parts, after cures have thus been effected by the instrument, have demonstrated this phenomenon, (closure of the sac,) as an actual occurrence, the question is at once disposed of. Having, however, seen no such positive evidence as can be furnished only by means of the knife, it must be assumed for the present, that the foregoing doctrine is not without its vulnerable points.

It is believed, for instance, that in all ordinary reducible herniæ, (and these only are claimed to be thus curable,) the sac itself, as well as its contents, recedes or is returned in the process of reduction, if not entirely, so far within the abdominal walls as to escape any such direct action upon it by the truss-pad, as would result in adhesive inflammation and consequent closure of its neck. The first evidence to be offered in support of this opinion, is simply the sense of touch; and to one accustomed to such manipulations as are required for the reduction of hernia, this alone would, in most cases, be conclusive; for, except when there are large depositions of fat, there is no difficulty in determining this question. True, we have the concurrent testimony of most writers, that *thickening* of the sac (?) is of frequent occurrence; and it is well known, also, that the constriction of the neck, brought about in this manner, has gone so far sometimes as to cause strangulation. So, also, though very rarely, have apparent cures resulted from wearing trusses for years, with the elongated and displaced sac, and perhaps a portion of the caul, also, constantly in the scrotum.

Such combined action of the pad in front, and the bone "in the rear"—these tissues being confined for years between them—could not result otherwise; without this *counter-pressure* by the pubes, however, it is doubtful whether even *this result* would ever be realized, much less *inflammation*.

But there are other reasons for supposing that the sac resumes its normal position too nearly, to become inflamed by the action of the truss.

If it be admitted, as it must be, that the sac passes *at least* beneath the superior pillar of the abdominal ring, then the question comes up, If the ordinary convex pad is *usually* worn overlapping the pubes as alleged, how can it produce inflammation in the sac, while thus guarded by the bone?

Again, if the cure of hernia is dependent upon inflammation of the sac, caused by the truss, such fortunate results would be most readily attainable and oftenest realized in those cases where is interposed be-

tween the instrument and the sac the *least amount* of animal tissue; and this, for the obvious reason that in cases of this description, the part to be acted upon is more exposed and accessible to the direct influence of the truss, and thus far more liable to take on inflammatory action, than when the sac is buried to any considerable depth beneath the surface.

Now what are the facts? They show that radical cures of hernia by the truss are confined almost exclusively to persons with fully developed muscles and no inconsiderable amount of adipose tissue at the point where the instrument usually rests; while in the opposite condition, where the muscles are naturally thin, or become attenuated by injudicious treatment or otherwise, cures by the convex truss are rarely if ever witnessed.

One more argument in support of the view here taken, and not specially favoring the theory of "inflammation of the sac," must suffice, viz.: the fact that several different surgical operations, all supposed to involve the peritoneum, (and for this reason denounced by many as dangerous,) have been performed "thousands of times *without any bad results.*" Now it is scarcely to be supposed that an operation like Wutzer's, for instance, (which is familiar to all,) could have been practiced extensively as it has been, without (in the words of the author) "severe peritonitis, still less any fatal results," if the peritoneum, as supposed, were pierced by the instrument employed, and the instrument, moreover, retained in its position for several days, and even weeks, as has been done; the tissues meanwhile, *including the peritoneum*, being so firmly compressed as not unfrequently to cause sloughing of the integuments. We repeat, the idea that this delicate and highly susceptible membrane could be subjected to such treatment "thousands of times without any bad results," is scarcely to be tolerated. And yet, if the peritoneum is usually found so low in the canal as to be bruised and inflamed by the truss, it is very difficult to see how it can escape in the foregoing and other somewhat similar operations. Finally, it is by no means clear that the truss under any circumstances could produce inflammation in the hernial sac, unless, perhaps, by confining it between the instrument and pubes, and with a degree of pressure which the patient would scarcely endure.

Moreover, if it could be thus produced, what assurances can be had that the torch thus applied may not result in the destruction of the citadel? By what means is inflammation in this sensitive structure to be hedged in? Once produced, how is it controlled so as never to extend beyond the limits of the neck of the sac? and how so nicel

graduated as *never, under any truss*, to have resulted in disaster of any kind—either ulceration, abscess, or even the slightest constitutional disturbance? No effect, save only the outpouring of lymph and agglutination and obliteration of the passage, and this the tardy work of months and even years.

But to return to the question. It has been stated that cures by the convex truss seldom or never occur in persons of thin and flabby abdominal walls; while in those of well-developed muscle and more rigid fibre cures do sometimes take place.

That results so antagonistic are produced by the same instrument is not incomprehensible. The readiness of the flabby muscles to recede upon the slightest touch of the instrument, as noticed on a preceding page, sufficiently accounts for the failure of the ordinary truss in such cases. It may be remarked, however, that though these are more difficult to treat successfully, yet with a suitable truss and judicious treatment they not unfrequently yield and entirely recover.

But, as was just observed, the most favorable cases for the radical treatment by the convex truss are persons with fully developed muscles and more or less rotundity of abdomen, and even inclining to corpulency—the latter being apparently most favored in this respect, for reasons presently shown.

The abdominal parietes in this description of persons are capable of resisting almost any amount of pressure, owing to the greater thickness and rigidity of their muscles, and still more perhaps to the force exerted in the opposite direction by the larger volume and greater weight of the abdominal viscera. Hence it will be seen that the strength of the ordinary truss spring does not suffice to drive the muscles so far backward as materially, if at all, to “enlarge the hernial opening,” by overstretching these tissues; consequently the action of the instrument, *if not too small and conical*, is confined primarily to the skin and subjacent tissues, extending next to the external oblique muscle, where, if the issue be a favorable one, its work is supposed to end. So far at least as regards the *curative* agency of the instrument, its functions cease with the perfect consolidation of all the tissues anteriorly to the inguinal canal—the skin, cellular substance, and external oblique muscle—this hardening process fully accomplished, and the cure is believed to be also achieved, if effected at all by the instrument. And here is found what is regarded as the true solution of the question above proposed; the consolidation of these structures, resulting from mechanical pressure, having rendered the anterior wall of the passage sufficiently rigid and unyielding no lon-

ger to admit of the escape of the viscera through their accustomed channel. In addition to the above mentioned effects of the truss, the canal is doubtless somewhat narrowed; and besides, it were not strange if, in some instances, slight adhesions occurred at the "mouth of the rupture;" and if so, these contribute of course to the happy result.

That corpulency is favorable to successful treatment and cure, as was observed, is supposed not to be wholly due to the greater resistance to pressure which the parietes, in such cases, exert—there are other reasons.

As the abdominal walls advance in obedience to the distending forces within, the course of the canal is changed, and becomes less and less favorable to the exit of the viscera, as these coverings continue thus to expand. Nor is this all. The pressure exerted by the viscera upon the internal oblique and transversalis, the conjoined tendons of which enter so largely into the formation of the gaping *entrance* to, as well as constituting also *mainly* the upper and posterior portion of the *wall* of this passage, must have the effect to modify and contract this internal opening, and perhaps impart to the passage a *valvular* character. How far the same influences may tend to obliterate that funnel-like depression or species of *cul-de-sac* in the peritoneum, always existing and justly deemed conducive to hernia, it is difficult to conceive.

Whether, in estimating the force exerted upon the abdominal parietes by the viscera, the laws of gravitation should be considered or not, it may be mentioned that in the above described conditions the centre of gravity is removed from this natural outlet to a point at a greater or less distance above and anterior to it; and, at all events, the force exerted is more widely distributed.

As an evidence of the greater power of resistance, at the usual place of ruptures, in cases of corpulency, and still more so in persons with strictly pendulous bellies, it may be observed that umbilical ruptures occurring in the adult male subject are confined almost wholly to corpulent men; while, moreover, in those having the pendulous abdomen, ruptures seldom or never occur, except from violence, and then usually in that form known as "ventral hernia:" thus showing, in either case, that for some reason the inguinal region, where natural openings exist, and the point originally by far the weakest, has now become more effectually barred against the escape of the bowels than any other portion of the abdominal walls—resisting their exit, even to the involvement of laceration of muscular tissue at different remote points.

Now, if the last described cases are most favorable to successful treatment, of which there is no doubt; and if these constitute but a very small minority of this class of sufferers, as they certainly do—then it follows, of course, that by far the larger portion of these unhappy persons are also the more unfortunate in this respect. And here the ever-recurring and momentous question addresses itself with a peculiar force and significance—Cannot something more be done than has yet been done towards the mitigation of sufferings and the protection of interests so vast and incomprehensible? And, again, who is it, if not the medical profession, that is competent to such a work? Where, if not here, will such a reform be inaugurated, with any prospect or hope of its accomplishment?

We are not unaware of the difficulties which so encompass this whole subject. Not only the difficulty of treating the disease satisfactorily even by the most approved means yet devised, but the difficulties, also, which from their nature would so embarrass every step towards the accomplishment of the reform so much to be desired in this department of the healing art.

It is not to be expected, perhaps, that every practitioner should furnish himself with suitable appliances of this nature for every emergency; though it is scarcely too much to hope that every member of the profession may yet be convinced that interests of such magnitude are not unworthy of his attention.

Institutions and organizations for the promotion of similar objects in other countries have contributed to good results, and could not fail of like effects here, to a greater or less extent.

(The discussion of other points of interest in connection with this subject generally, together with statistics relating to the same topic, and now in course of preparation, will be reserved for a future occasion.

No. 2 BARCLAY STREET, }
New York.

Translations prepared expressly for the MONTHLY.

THE ACTION OF PHOSPHORUS ON THE BLOOD.

BY PROFESSOR NASSE.

1. A grain and a half of phosphorus, dissolved in an ounce and a half of rape-seed oil, was given to a cur, being mixed with the food he consumed during two days. As he only took food once a day, consequently each time he consumed three-quarters of a grain. No symp-

tom manifested until the end of the second day; then his appetite failed, his movements became heavy, the urine sanguinolent; some loss of blood by the anus. The fifth day the dog rapidly became more feeble, and died. In the cadaver, the blood was found entirely liquid, without clot. The stomach was not inflamed. Abdominal cavity contained a little extravasated blood; a considerable quantity of this was found behind the peritoneum, aside of the vertebræ, and especially under the kidneys, and along the course of the ureters to the bladder. A layer of sanguinolent mucus, one or two lines thick, was found attached to the mucous membrane of the duodenum, which was not even softened. The lower portion of the intestinal canal was bloody. The kidneys were neither inflamed nor infiltrated with blood. The mucous membrane of the bladder was of a slight reddish hue. The testicles were colored red from bloody extravasations. In the liver ten or twelve inflamed nodules, from the size of a pea to that of a bean, were observed, generally located near the surface; these nodules were gray, yellowish, and soft in the centre, surrounded by a red, firm substance.

2. A bitch of larger size took the first day one grain, the second a grain and a half, and the third a half grain of phosphorus dissolved in poppy oil; that is, three grains in three days. It was taken in the food with which it was mixed, and she ate this regularly until the evening of the third day, when a little stiffness was observed in the posterior extremities, and the hair began to bristle up; otherwise the bitch was active, drinking very much. Her strength suddenly failed on the fourth day. Seven or ten minutes after death, the blood was collected from the vessels; it weighed 545 grammes; the whole weight of the dog was 13 kilogrammes. The blood did not coagulate; there were not even flakes in it; the red color brightened a little in the air, but under the microscope it composed itself in the normal way. The stomach was of a dark red, and contained a dark-brown pultaceous mass, (coagulated blood,) which was even found in the large intestine. The appendicula vermiformis was also filled with blood. The mucous membrane of the small intestine was softened, thickened, and strongly injected, consequently inflamed. Extravasated blood was found in the cellular tissue surrounding the pancreas, partly coagulated, and consequently diffused at first. The liver was full of blood. The urine dark, but not sanguinolent. Everything else was normal. Neither brain nor spinal marrow contained any extravasated blood.

3. A large old hunting dog took daily with his food, without any repugnance for four days, three-quarters of a grain of phosphorus dis-

solved in three-quarters of an ounce of oil; thus taking six grains. On the fourth day he lost his appetite. The day following blood ran from his mouth and anus. Death about noon. The body was opened in the afternoon. Everywhere the blood was liquid, viscous, and of a dark color; it did not coagulate in the air, and the *cruor* (blood-globules) did not separate from the serum. Cadaveric rigidity soon took place. The mucous membrane of the *duodenum* and the upper portion of the *jejunum* exhibited some red spots. The kidneys were injected, but the liver was not filled with blood. There was much sanguinolent mucus in the stomach.

4. A tolerably strong pregnant bitch took a grain of phosphorus in an ounce of oil; no effect was observed during twenty-four hours. The second day a grain and a half of phosphorus, dissolved in an ounce and a half of poppy oil, was slowly injected into the jugular vein; in a few minutes the animal ceased to live. The blood was coagulated in the cadaver opened immediately. The foetus was still alive in the uterus.

5. At five o'clock in the evening a half ounce of poppy oil, holding in solution a half grain of phosphorus, was injected into the stomach of a very large rabbit. The experiment was repeated the next morning at 11 o'clock, with 12 grammes of the same phosphorous solution. The animal remained tranquil; it took no nourishment except at noon; the movements of the heart were strongly quickened. It ceased to live during the following night. In the morning the body was found rigid. An opening in the jugular vein gave no blood. The lungs were filled with blood—many clots in the heart. The intestinal canal was not inflamed, and there were no extravasations. In the contents of the stomach, phosphoric acid was detected. This experiment was repeated on another rabbit, with the same result.

6. Five milligrammes of phosphorus, mixed with a little rye paste, were introduced into the stomach of a strong frog. There was no vomiting. Death supervened at the end of twelve hours. The blood contained in the heart was liquid. Phosphorus could be detected in the stomach and upper portion of the intestinal canal. No cadaveric rigidity.

These are the experiments of Nasse, which seem to invite attention. Heretofore, as regards the effects produced by the administration of phosphorus, we have only known the excitation of the nervous system and the genital organs, or death, with inflammation of the stomach and intestinal canal. The liquid condition of the blood is a fact quite new, and the more remarkable, because it is constant whenever the

phosphorus has been absorbed and assimilated. The fourth experiment is not contradictory, for death may have been induced by the presence of the oil in the pulmonary capillaries—phosphorus could not have been assimilated.

The experiments with the rabbits, whose hearts contained coagulated blood, seem not to agree with those made on dogs; but, if we reflect on the readiness with which the rabbits succumbed, recollecting the presence of non-absorbed phosphorus in the stomach and intestines, we must believe that the phosphorus could not have been absorbed, which would explain the coagulation of the blood in the heart.

The liquidity of the blood appears to us a constant occurrence resulting from the action of phosphorus. This action is explained by Mandl, in two ways: either the phosphorus acts chemically on the plasticity of the blood, by combining with its elements, or it acts indirectly on it, through the medium of the nervous system. The first explanation appears refuted by the fourth experiment, in which phosphorus dissolved in oil was injected in the jugular vein of a dog. The blood, upon which the phosphorus could have directly exerted its influence, was found coagulated; from which one may conclude that the liquidity of the blood, observed after the injection of phosphorus, in the first, second and third experiments, was not the result of direct chemical action on the blood.

The coagulation of the blood cannot be attributed to the phosphorus dissolved in the oil, since Nasse has elsewhere shown that indifferent substances, as oil, injected in the blood, sometimes produce coagulation. Furthermore, in this case Nasse says that an analysis of the blood would not explain the energetic action of the phosphorus.

In the opinion of Mandl, probabilities are in favor of the second supposition. They are based upon what has been observed as regards the liquidity of the blood in certain cases of sudden death by lightning, which only acts on the nervous system. But we know that phosphorus is a very powerful excitant of the nervous system, like electricity. Furthermore, in persons struck by lightning, the fluidity of the blood is generally connected with a very considerable cadaveric rigidity; so great that sometimes the body remains upright in the position the individual occupied at the instant of the electrical discharge. A very decided cadaveric rigidity has also been observed by Nasse, in dogs who have taken phosphorus, despite the fluidity of the total mass of the blood.—*Gazette des Hôpitaux*.

L. H. S.

URÆMIA.

BY M. TREITZ.

1. Whenever the urinary secretion is suppressed, the substances destined for excretion, and especially urea, accumulate in the blood, as modern chemistry has shown us.

2. This accumulation is also effected by the resorption of the urine already secreted.

3. The superabundance of urea in the blood (*uræmia*) forms in itself an important pathological condition, and predisposes probably to exudations in different organs.

4. Urea passes from the blood in all the secretions; its presence has been detected in the saliva, the milk, the cutaneous secretion, as well as the transudations.

5. It is most frequently and most abundantly encountered on the intestinal mucous membrane.

6. It is regularly resolved by the action of the intestinal liquids into carbonate of ammonia—a fact which the author ascertained by experiment.

7. The carbonate of ammonia provokes irritation, blennorrhœa, ramollissement, catarrh, and dysenteric destruction of the intestinal mucous membrane. Several forms of dysentery arise from this source. Mortification may produce gangrene of the intestine; but a cure by cicatrization is possible if the intestinal liquids should lose their corrosive properties.

8. The carbonate of ammonia, spread throughout the intestinal canal, is reabsorbed by the mucous membrane, and transported through the ordinary channels into the blood; from this results ammoniacal poisoning of the blood—*ammonihæmia*, and the phenomena usually called *uræmic*. The author establishes a difference between *ammonihæmia* and *uræmia*, reserving this last name simply for an accumulation of urea in the blood, whilst he understands by the first the presence of ammonia in the blood and the phenomena proceeding from it. He does not agree that *ammonihæmia* is developed in the manner pointed out by Frerichs, that is, by a decomposition of the urea, which takes place in the blood itself, but he attributes it to the absorption of the ammonia which is formed by the decomposition of the urea secreted in the intestines.

9. *Ammonihæmia* is also developed in a direct way, through absorption of decomposed and ammoniacal urine, as in cases of urinary fistulæ, &c.

10. The infection of the blood, by the substances mentioned above, has grave consequences only when their excretion by the normal secretory organs is prevented.—*Presse Med. Belge.* L. H. S.

MONTHLY SUMMARY OF AMERICAN MEDICAL JOURNALISM.

By O. C. GIBBS, M.D., Frewsburg, N. Y.

Origin of Ovariectomy.—In the *North American Medico-Chirurgical Review*, for November, Prof. S. D. Gross, in a biographical essay of Dr. Ephraim McDowell, remarks upon the subject of ovariectomy at some length. "To Kentucky," he says, "belongs the honor of having furnished to the world the first case of extirpation of the ovary, for organic disease of this organ. This honor is justly and exclusively due to the late Dr. Ephraim McDowell, of Danville."

His first operation was performed upon Mrs. Crawford, of Kentucky, in December, 1809. It is not positively known how many times Dr. McDowell performed ovariectomy, but it is supposed that he operated *thirteen* times, with success in at least *eight*. It certainly required no small degree of moral heroism, for a pioneer physician, in the backwoods of the New World, to be also a pioneer in so extensive and dangerous an operation as ovariectomy. Eminent surgeons of the Old World ridiculed the statement, and many, fifty years later, are still incredulous.

Dr. McDowell was no less successful as a lithotomist. For stone in the bladder he operated at least thirty-two times without the loss of a patient. Prof. Gross says that, in 1812, he operated upon James K. Polk, then in the 17th year of his age.

Spina Bifida.—In the *North American Medico-Chirurgical Review*, for November, Prof. S. D. Gross has an article upon spina bifida, or rather a clinical lecture based upon the report of two cases which were presented at the college clinic. Both the cases reported were treated by injections of iodine, and both died, though the second case, at one time, gave promise of a cure. The patient died in convulsions; the tumor having burst and discharged its contents two months and four days after treatment was commenced. Of all the modes of treatment devised for the cure of spina bifida, Prof. Gross gives his preference to that of compression. The combination of pressure with fine punctures he speaks well of. Thus he says, "Several cases are report-

ed in which a cure was obtained by a combination of methodic pressure with frequently repeated puncture; the latter is to be made subcutaneously with a very fine trocar or bistoury, the opening being well closed immediately afterwards, to prevent the introduction of air. Only a portion of the fluid should, however, be drawn off at a time, as a sudden evacuation of the tumor would be followed by the serious consequences already described."

Climatic Influence of the Northern Lakes.—In the *Nashville Journal of Medicine and Surgery*, Dr. J. N. Graham, of Chicago, has an article upon the above subject. Dr. Graham presents, in person, an illustration of this influence. He regards himself well advanced in the first stage of consumption. In a few months he had fallen away from 130 to 93 pounds; cough was harassing and night-sweats exhausting. In one summer spent at Mackinaw and about Lake Superior he improved every way, and his weight increased from 93 to 111 pounds. Dr. Graham speaks highly of Mackinaw, and says, "During a few weeks spent on the island, I found several persons from the Southern States. Some of them told me they had made this their regular summer resort for a number of years. One gentleman told me he had tried for his health almost all the milder climates of the globe. From the valleys of the Andes of South America, to the sunny plains of Italy; from the waters of the Nile in Egypt, to the heather peaks of Scotia; and yet he had found no climate that agreed with him so well as that of Mackinaw."

Our country evidently presents localities preferable for the consumptive invalid to any in Europe. As a winter residence, however, we think Mackinaw is not the better place; the exposure is too great. In summer, Mackinaw and the Lake Superior region is delightful, and their bracing airs and appetizing amusements are healthful in the extreme; but, as a winter residence, the leeward side of the western mountains would be preferable.

Dr. Graham thinks patients, in the last stage of consumption, should not be sent North, as "their nervous energies wilt under the chilling influence of the climate, and rapidly sink under increased cough, impeded circulation, and the rapid progress of their disease." He might have added that persons in this stage should not be sent from home at all! If sent South, they will sink still more rapidly, under the enervating, debilitating influences of a diminished oxydation, under increased heat and a more rarefied atmosphere.

Dysentery.—The *Nashville Journal of Medicine and Surgery*, for November, has the following: "Dr. Travis, of Marlboro, Tennessee,

in a letter to the editor, says: 'I have taken a new method of treating dysentery. I use three parts of laudanum and one of ess. peppermint, mix, and give a teaspoonful after each dejection. I also give blue pills and quinine to cure the fever, with suitable diet. I have informed some of my professional friends of my mode of treatment, and they have tried it and been successful.'

Common Salt, and its Medicinal Uses.—In the *Oglethorpe Medical and Surgical Journal*, for October, Prof. G. T. Maxwell has an article upon the above subject. We have space only for a few remarks upon its use in *dysentery* and *diarrhœa*. After speaking very highly of salines in these diseases, he says: "Diarrhœa and dysentery differ materially in their pathology, only in the portion of the intestine attacked by disease; the former affecting the small, the latter the large intestines; and the same principles of treatment are applicable to both diseases. Knowing that we are now treading on disputed grounds, and not desiring to enter upon the discussion of the question, we will only say, we have treated many cases of both diseases satisfactorily, by the same means, modified with reference to the stage. We have used almost every one of the various saline preparations, but there is not one superior to *common salt*, and we have inclined to the opinion, none so good. Its action is mild and certain, and in flavor it is not so disagreeable to the taste as the bitter salts." * * "In hundreds of cases of an aggravated character, where we have administered common salt, the relief has been so prompt and decided, that we feel warranted in placing it before the profession as a remedy of no ordinary value. The mode of administering it is as follows, viz.: Of a saturated solution give a table-spoonful, or less if it nauseates, every hour or two, until two or three watery evacuations are produced, after which give eight or ten grains of Dover's Powder. If there is any indication of periodicity in the attack, combine with the latter quinine, to be repeated *pro re nata*."

We give the above, yet protesting against diarrhœa and dysentery being considered as analogous diseases. Dysentery is always an inflammatory affection of a peculiar character, affecting a particular part. Diarrhœa is not necessarily an inflammation, and the appropriate treatment for each of these diseases is far from being necessarily identical.

Samson Snake-Root, (Gentiana Ochroleuca.)—In the *Oglethorpe Medical and Surgical Journal*, for October, Dr. E. W. Lane has an article upon the remedial properties of this agent. He says of it: "I have used it as an emmenagogue and as a tonic, with entire satis-

faction. I have used it in several cases of dyspepsia, and always with marked benefit; and, in fact, in all cases where there is weakness of the nervous forces, it is *the remedy*."

In a note to this article, by Prof. H. L. Byrd, confirmation is made to these statements. The common people regard it as an emmenagogue, and use it very much as we use ergot.

Gonorrhœa Treated with Tartar-Emetic.—In an article in the *Charleston Medical Journal and Review*, by Dr. F. P. Porcher, tartar-emetic is recommended in gonorrhœa. In regard to his method of using it, he has the following: "In the formative stage of the disease, soon after its appearance—within the first fifteen to thirty-six hours, if possible—and before the inflammation has made any advance, order the recumbent posture to be preserved, and the use of warm mucilaginous drinks, with nitre and doses of *tartar-emetic* sufficient to keep up constant nausea. The sedative circulates to the remote parts of the system, the progress of the inflammation is thus put an end to, and in my experience, *with but one exception*, the disease completely arrested."

Hoffman's Anodyne in Delirium Tremens.—In the same article above referred to in the *Charleston Medical Journal and Review*, Dr. Porcher speaks highly of Hoffman's anodyne in delirium tremens. He says he has used it with satisfactory results in eight cases—"one drachm being administered, diluted with water, repeatedly, until nervous tremor was allayed and sleep induced." In the insomnia connected with this disease, he thinks opium has better effect when combined with tartar-emetic, as follows: "R.—Tr. opii., gtt. xl.; T. emetic, gr. $\frac{1}{4}$, repeated every half hour till sleep is induced."

Large Doses of Opium in Centric Convulsions in Children.—In the same paper above referred to, Dr. Porcher commends opium in full doses, in cases of convulsions in young children, when not dependent upon worms or errors in diet. An illustrative case is reported. Dr. Porcher suggests that a combination of chloroform and laudanum would probably be beneficial in these cases. For the last five years we have been in the habit of trusting these cases to chloroform by inhalation, and the results have been so satisfactory that we have had no reason to seek further for remedial aid.

A New Porte-Cautique.—In the same paper, Dr. Porcher has a few remarks upon the porte-caustique. Because of the selection of a cheaper metal than platinum, and because of the often imperfect manufacture of Lallemand's instrument, the cup loaded with nitrate of silver is occasionally left in the bladder. To obviate this objection, Dr.

Porcher occasionally substitutes the use of two other instruments instead. One is a catheter, which is made to serve the purpose of a syringe by means of a metallic rod accurately fitting its cavity. With this, a strong solution of nitrate of silver is injected where desired. The other instrument is constructed very similar to Lallemand's, except instead of the cup, "a bit of sponge is rolled tightly around the end of the central rod, and saturated with a strong solution of nitrate of silver. This can be unmasked when it reaches the proper position, and the caustic made to come in contact with the relaxed tissues, including the mouths of the seminal vessels. And, very recently, indeed, I have accidentally adopted a simple expedient rendering the operation quite safe, which I have just put in practice. It consists in pouring a strong solution of nitrate of silver through the orifice of a hollow catheter after its introduction to the neck of the bladder, which it reaches through perforations made at the distal end, extending around an inch or so from this extremity."

Umbilical Hemorrhage.—In the *Charleston Medical Journal and Review* for November, Dr. A. N. Talley reports three cases of this unfortunate and troublesome accident. The first two were treated in the usual manner, not omitting the plaster of Paris recommended by Dr. Churchill. Remedial means were ineffectual, and both patients died. The third case was treated with Squibb's liquor of the persulphate of iron. "The effect was instantaneous; the hæmorrhage, which, despite every appliance, had continued fearfully rapid, was at once arrested, and did not again recur. The child is now quite well, and has entirely recovered from the prostration consequent upon the excessive loss of blood."

This one case is not sufficient to establish the merits of the agent employed; but as the result was characteristic and in keeping with its well-known properties, hopes may be entertained of its future usefulness in these formerly intractable cases.

Scarifications of the Glottis.—A few years ago, Dr. Gurdon Buck spoke highly of scarifications in *œdema-glottidis*. The same treatment has been advocated in a recent number of the *London Lancet*. In the *New Orleans Medical News and Hospital Gazette*, for November, Prof. Austin Flint reports a case of laryngitis successfully treated by *tracheotomy*; also two cases of *œdema-glottidis* resulting fatally after the operation of tracheotomy. He thinks the operation was performed quite too late. In one case the glottis was scarified as suggested by Dr. Buck. We quote Prof. Flint's remarks upon scarifications. He says, "The scarifications are not so practicable as they may appear to

be beforehand. In a person struggling for breath—the larynx in constant motion, and efforts at vomiting excited by the presence of the finger in the throat—it is difficult to guide the knife and give the incisions the proper directions. Judging from this case, tracheotomy is an easier operation. The hæmorrhage which is liable to occur, is a serious evil. The blood in this case, accumulating in the air-passages, contributed to the dyspnœa, and probably was in part the occasion of the rapid increase of the difficulty of breathing, although the immediate relief was such that it was hoped the scarifications had proved effectual. This is a point to be considered. Another objection to scarifications, which suggests itself, is the liability of cutting the vocal cords and impairing permanently the voice, in cases in which this method is successfully employed. On the whole, expressing the opinion with due diffidence, in view of the fact that the case now reported is the only one in which scarifications have been attempted under my own observation, I am led to think that tracheotomy is preferable, as more easily performed, giving no more pain to the patient, being at least as innocuous, and vastly more certain.”

Veratrum Viride.—In the *Chicago Medical Examiner*, for November, is published a report upon veratrum viride, by Dr. A. Hard, which was prepared for and read before the *Illinois State Medical Society*. The author says, “I have found it most useful in diseases of an inflammatory type, such as acute pneumonia, rheumatism, dysentery, and peritonitis, particularly puerperal peritonitis; and in treating such cases, I administer a full dose when first called, so as to bring the patient under its influence as soon as possible, and in many cases it will be found as effectual in arresting the further progress of the disease, as water to quench fire. After the specific effects of the remedy are obtained, it should be continued in smaller doses, sufficiently large to keep the pulse at or a little below the normal standard.”

Of its action, he says, “It is the most reliable arterial sedative, most certain in its effects, and least dangerous of any with which I am acquainted.” In the same paper, Prof. W. H. Byford, of Chicago, is quoted as saying, “I have been wary in the use of it in scarlatina and measles, lest it might suppress, by its powerful revulsive direction to the alimentary tubes, the rash.” Under other circumstances of inflammation or fever, convulsions, &c., he regards it as “one of our most reliable remedies.” Bearing upon the point of propriety of veratrum in eruptive fevers, we would quote the opinion of Dr. Prince, found in another paper, though in the same journal above referred to. Giving the history of an epidemic of scarlet fever, and remarking upon

the treatment, he says, "Some of the cases of scarlatina manifested much excitement in the first stage, and in two cases I used Norwood's tincture of veratrum viride. This acted like a charm in controlling excitement, and moderating the frequency of the pulse."

Dr. Hard quotes Dr. T. D. Fitch as saying, "In his practice, especially in the treatment of the more acute phlegmasia, he has made it supersede the use of both tartrate of antimony and potassa, and the lancet, except in a few rare instances."

Scarlet Fever.—In the *Chicago Medical Examiner*, for November, there is published a report upon *practical medicine*, furnished by Dr. C. Goodbrake, for the *Illinois State Medical Society*. Under separate heads we shall allude to a few of the more novel opinions and practices. First, then, of scarlet fever: Dr. J. N. Niglas' treatment of this disease is *expectant*, and contains nothing noteworthy, except the local treatment. He says, "The region of the parotid and submaxillary glands, from the beginning, I advise to be covered with cotton, and flannel wrapped around the neck; and as soon as the slightest swelling commences to be perceptible, a liniment composed of ol. amygdal. dulc. ʒij., liq. ammon. caust. ʒij., ext. conii. ʒj., gum camphor gr. x., is repeatedly applied during the day, the cotton and flannel wrapped around; and glad am I to say that (during the severe epidemic just passed) none of the cases under my charge were lost by consecutive suppuration."

Dr. Prince would control the pulse with the veratrum viride, and then use the stimulating treatment immediately and freely if need be.

Dr. Hiram Nance saw one very severe case recover under full doses of carbonate of ammonia, that he thinks must have died under any other medication. It (ammonia) was first recommended by a French physician, and Dr. Nance's experience is in its favor.

There are few diseases more nearly allied in nature, or in therapeutic requirements, than *erysipelas*, *diphtheria*, and *scarlet fever*. They are produced by a specific poison, affecting the system peculiarly and specifically. We have not space to enlarge—suffice is to say that muriatic tincture of iron, quinine, and stimulants, have been found of the most service in *erysipelas* and *diphtheria*, and they will be found of corresponding benefit in scarlet fever.

For ourselves, we have no doubt that full doses of quinine is one of the most important remedial agents that can be brought to bear upon scarlet fever. Though foreign from our plan, we trust we may be excused for quoting from a transatlantic journal in support of these views. In the *London Lancet*, for October, (American reprint,) Dr. J.

Hawkes, speaking of malignant scarlatina, says, "For those who may have such cases to meet—and no doubt they occur only too often—I can forcibly recommend the use of quinine. My attention was first called to it in this disease, by the excellent little work of Mr. Peter Hood, in which he so strongly urges its adoption in all forms of scarlet fever. I have put his plan to an extensive test in a large dispensary practice, and have every reason to bear testimony to its success."

As additional evidence in support of the tonic and stimulating treatment in scarlet fever, we again quote from the same number of the *Lancet*. Dr. T. J. Graham, speaking also of malignant scarlet fever, says, "There is abundant evidence before the profession in proof that the sesquicarbonate of ammonia possesses specific powers over the worst forms of scarlatina, and that, when the eruption recedes, no means known have the same power in reproducing it, and relieving the patient." * * * "I am fully convinced that this preparation of ammonia, administered regularly day and night, and *trusted to alone*, with a mild aperient and a suitable diet, will be found fully equal to the restoration of the patient. The great and superior value of this excellent medicine in scarlatina and rubeola is, I fear, but half apprehended."

Dysentery.—The report above referred to contains some remarks upon *dysentery*, from which we shall quote a few opinions. Dr. R. G. Laughlin's treatment consists "in the use of calomel, opium, quinine, and the usual astringents, with veratrum viride to control the circulation." He reports satisfactory results.

Dr. J. W. Coleman reported his experience in a severe epidemic of this disease. He says, "Most of the cases required mercurials at the start, combined with opium; and if there was any periodicity in the accompanying fever, we used quinine freely." "We generally commenced the treatment with something like this:

R.—Sub. Murias Hydrarg.,	gr. xij.
Pulv. Opii.,	gr. x.
Carb. Soda,	gr. xxx.

Mix and divide into six powders, one to be taken every three or four hours, according to the severity of the symptoms, and continued them until bilious discharges were procured." Opium was continued with a liberal hand—from one to four grains—the effect and not the amount governing the dose.

If the discharges were profuse and exhausting, he gave every four hours a teaspoonful of the following:

“R.—Tincture Camphor,
Tincture Kino,
Paregoric, } ää.”

Neither Dr. Goodbrake, nor any one replying to his circular, alluded to saline cathartics in dysentery, used alternately or conjointly with full doses of opium, and such other remedies as the peculiarities of each case required. This last has proved so successful in our hands, that we would be glad to see some of our Western readers put it to the test.

We observe that Dr. Jackson, in the *Boston Medical and Surgical Journal*, for Nov. 22d, has a few remarks upon the treatment of dysentery. He thinks very highly of the saline treatment, and is confident he has aborted severe attacks of dysentery with a dose of Epsom salts, that under any other known treatment would have been greatly protracted.

Diphtheria.—Upon this subject, but little that is new or interesting is elicited. Dr. Prince says that the local application of the nitrate of silver has not met his expectations. “A weak infusion of capsicum and a saturated solution of chlorate of potash, singly or in combination, have proved more satisfactory.” Dr. Goodbrake says, “As a local application to the fauces and tonsils, we found the mur. tr. iron to answer the best purpose in all cases that came under our treatment. We tried the nitrate of silver, sulph. of copper, alum and sulph. of copper combined; but the tinct. of iron seemed to have the best effect in our hands.

The best remedies internally seemed to be quinine, tinc. of iron, chlorate of potassa, and good porter or brandy, with good nutritive diet.” No allusion is made to a saturated solution of common salt, as a wash or gargle to the throat; this, of all means, has pleased us the best. We have applied this remedy to the throat for another trouble, which we may as well mention here as elsewhere. A lady of our acquaintance had, for many years, been subject to frequent attacks of quinsy, which always passed on to suppuration. In the last year, we have aborted two severe attacks by the local application of muriated tincture of iron, applied several times a day. We have reduced the remedy with about two parts of water to one of the tincture.

Diarrhæa of Children.—In regard to this disease, we shall quote but one remark from the report. Dr. J. O. Harris remarks upon the treatment as follows: “I found that after exhausting all the usual remedies advised by our standard authors, and by my brother physicians, that quinine in *full* doses, frequently repeated, (acted or seemed to act)

admirably. I thought at the time that I was prescribing empirically, and now I do not pretend to explain the *modus operandi* of the remedy. I only know this, that my patients recovered under the use of quinine, and I still frequently prescribe it, when I see no particular indication for its use."

Pneumonia.—In regard to the treatment of this disease, by those who contributed to the report, there was great unanimity. *Veratrum viride* took the place of the lancet and antimony; and if the disease manifested any symptoms of periodicity, quinine was regarded as an all-important remedy.

Typhoid Fever.—The following is Dr. Nance's treatment of this form of fever: "My treatment, stated in brief, consisted of spts. nitri. dulc., ʒviiij., Norwood's tinct. *veratrum viride*, gtts. xl. Mix; give one teaspoonful to an adult every three hours, so long as the active stage remains, increasing or diminishing the dose as the case requires. It may be necessary to continue this medicine for eight or ten days, or more. I also prescribe at the same time turpentine emulsion, usually combined with tinct. opii.: the first prescription subdues the activity of the pulse, and acts favorably upon the urinary and perspiratory systems; the latter, containing laudanum, quiets the nerves, promotes sleep; and the spts. turpentine has its specific action upon the glands of the mucous membrane of the bowels." When convalescence is established, or if the patient begins to sink, he resorts to support. "My prescription during the fall, under such circumstances, consisted of sul. cinchonia, grs. iij.; camphor, grs. iv.; carb. ammo., grs. iij. Mix, and give every four hours, and alternate with wine from two to three teaspoonfuls."

We apprehend the secret of success in the treatment of typhoid fever consists in *preventing* rather than *treating* bad symptoms. Many physicians give turpentine only when the tongue is dry and the bowels tympanitic. If turpentine will heal the ulcerated state of the bowels, which is sometimes present in the late stage of bad cases, it is not unreasonable to suppose that, in the incipient stage of this condition, it may act curatively and prevent the diarrhoea, tympanitis, the red and dry tongue, &c. Many only support the system when death seems to be imminent. Tonics, such as quinine modified by opium and wine, can be resorted to much earlier than they often are in this disease. When prostration is very decided, we think Dr. Nance's two or three teaspoonfuls of wine will not bring out the full influence of a supporting treatment.

We have given a tolerably full synopsis of this report, because it is

a good exponent of modern treatment, among Western physicians, of some of our more common diseases.

Hemoptysis Treated with Muriated Tinc. of Iron, &c.—In the *Chicago Medical Examiner*, for November, Prof. N. S. Davis reports an alarming case of hemoptysis, occurring in a lady 24 years old, who had a decided hemorrhagic diathesis; inasmuch as the father of the patient and one sister had previously died from hemoptysis. Common salt, gallic acid, acetate of lead, opium, alum, tinc. matico, tinct. gelseminum, oil turpentine and quinine were all thoroughly tried, with partial and temporary benefit. "At this stage of the case," he says, "we advised the tinct. ferri muriatis, and tinct. of ergot, equal parts, of which forty drops were taken every two hours. Under the use of this mixture the hæmorrhage ceased in less than twenty-four hours, and has not been renewed since."

Diphtheria.—In the *Louisville Medical News*, for October, Dr. S. P. Bryan reports his experience with diphtheria. Within the last year he has treated *fifty-five* cases. In these cases all but sixteen showed the peculiar diphtheritic exudation. We should be glad to give Dr. Bryan's remarks upon the treatment in full, for we regard it as quite judicious; and, besides, it was successful in all of the cases but *one*; but want of space will prevent. We simply copy his recapitulation.

1. "Diphtheria is not a self-limited disease, in the light in which we so regard measles, variola, and typhoid fever, but that its duration may be materially abridged, as well as its violence greatly mitigated, by prompt and proper treatment.

2. "The milder cases of diphtheria require no other treatment than the local application of nitrate of silver, in solution, and the internal use of chlorate of potash, together with generous diet and the cautious use of such mild aperient medicines as will maintain a soluble condition of the bowels; while the more severe cases may generally be very promptly controlled, if the treatment is early commenced, by the addition of quinine, and occasionally of brandy and iron, to the foregoing.

3. "Depletion in this disease, whether direct by blood-letting, or indirect by purgation, &c., is not only a valueless expedient, but, in consequence of its debilitating effects, is positively injurious, by favoring the accession of typhoid symptoms, and preventing a rapid and satisfactory convalescence."

The nitrate of silver is applied—20 grains to the ounce—by thoroughly mopping the throat three or four times a day. This is followed, half an hour later, with a solution of chlorate of potash—3ij. to

iv. to water Oj.—used as a gargle. In severe cases, his main dependence is placed upon quinine, which, to adults, he gives in from 20 to 30 grains a day. "This," he says, "appeared to control the fever, and to arrest the progress of the disease in all instances, except the single fatal case before referred to, in from two to five days." He says further: "It appeared to me that the quinine exerted a curative influence not inferior to that which it exerts in ordinary malarious fevers; the pulse, which before was small, feeble, and rapid, numbering in some instances from 120 to 140 beats per minute, speedily becomes, under its benign influence, fuller, stronger, and slower, just as we often see in congestive fever."

Dysmenorrhœa.—In the *St. Joseph Med. and Surg. Journal*, for November, Dr. J. B. Snelson has an article upon dysmenorrhœa, in which he recommends quinine in combination with prussiate of iron, particularly in the rheumatic or neuralgic varieties. He would treat the menstrual period with opium and the warm bath, and the intermenstrual period with the following:

"R.—Sulph. Quinine,
Ferri. Ferrocyanureti, ää. gr. xl. M.

Divide into pills No. xx. One of the pills to be taken morning, noon, and night; this treatment to be continued during the whole intermenstrual period." If we rightly remember, Dr. E. J. Tilt, in the *London Lancet*, for 1851 or 1852, recommends quinine in combination with sulphate of iron and hyoseyamus, or opium, for most of the unnatural manifestations of the menstrual function. We are not certain that dysmenorrhœa was included. From the change which strychnine has in our hands over the rheumatic or neuralgic difficulties of a chronic character, we would suggest it, in connection with quinine, in dysmenorrhœa.

Post-Partum Uterine Hæmorrhage.—In the *Lancet and Observer*, for November, Prof. George Mendenhall reports a severe case of post-partum uterine hæmorrhage. The usual means were resorted to without benefit; the hand was inserted into the uterus, also lumps of ice, but still with no check upon the hæmorrhage. Ergot was given, but with no perceptible effect. At this stage a catheter was introduced to the uterine fundus, "and about three ounces of the saturated solution of the persulphate of iron injected through it into that organ." Its retention was secured for a few minutes by the hand in the neck of the uterus. The injection produced no pain, but "from that moment not another drop of fresh blood was discharged from the

uterus and vagina." The patient "recovered without an unpleasant symptom."

In-Growing Toe Nail.—During the past year we have given several methods of curing this troublesome affection. In the *Lancet and Observer*, for November, Dr. B. Weber reports a new method of cure, which we subjoin: "I make use of the following composition:

R.—Corticis guerci, ʒss.
Gallaram turcicarum, ʒj.

Conscisse conque in ag. commun. ʒx., ad remanentiam, ʒvj.; Colatura addatur Argenti nitrici fusi, ʒj.—ʒj.; Acet. Saturn. ʒij. M. D. S. Embrocatio. With this mixture the sick toe is to be moistened all over, and as much as possible of the liquid dropped into the fissure between the nail and flesh, and then the toe to be bandaged with a strip of linen about one and a half inch wide and eight inches long. After the end coming next to the nail has been saturated thoroughly with the liquid, the balance of the strip is wrapped around the toe. The moistening of the inner end of the strip has to be repeated through the day four, or six, or ten times, and to be continued until a cure is effected. Generally the application causes no particular pain; if, though, there should be much sensitiveness, from six to twelve grains of morphine might be added. Soon after the application of this remedy the swelling of the toe subsides, the excrescences, the proud flesh shrink, get black, as also the whole toe; the nail gets brown, soft, brittle, loses its stiffness, and ceases to press and dig into the flesh; the skin peels off, and out of the matrix a new, well-formed nail will be developed."

The "Throat Distemper" of the Last Century.—In the *Boston Medical and Surgical Journal*, for Nov. 15th, Dr. G. H. Gay republishes a paper upon the above subject, written by Jonathan Dickinson, of Elizabethtown, N. J., in the year 1738, and published in Boston in 1740. Dr. Gay intimates that the disease described, and for which directions were given for treatment, was none other than diphtheria. Dr. Dickinson describes no less than six varieties of the disease, and some of the symptoms do conform very accurately to those of the last-named disease. When he says, "The whole throat, and sometimes the roof of the mouth and nostrils, are covered with a cankerous crust, which corrodes the contiguous parts, and frequently terminates in a mortal gangrene, if not by seasonable applications prevented," we recognize a disease resembling diphtheria. Also, when he speaks of the disease as an epidemic, often causing great fatality, with the symptoms of hoarseness, difficult breathing, loss of voice, occasional bubo-like

ulcerations, and the expectoration of large quantities of tough whitish slough (membrane) from the lungs, we also recognize conditions sometimes present in diphtheria. Again, in uniformity with the above, speaking of symptoms, he says, "The tonsils first, and in a little time the whole throat, is covered with a whitish crustula; the tongue is furred and the breath foetid." But other symptoms are mentioned that show a dissimilarity to diphtheria, as it now manifests itself: thus, he says, "Upon the 2d, 3d, or 4th day, if proper methods are used, the patient is covered with a miliary eruption, in some exactly resembling the measles; in others, more like the scarlet fever, (for which distemper it has frequently been mistaken,) but in others it very much resembles the confluent small-pox."

It may be interesting to notice, in this connection, a remark or two in regard to treatment. As a local means to the throat, he says, "I have found the following method most successful: Take Roman vitriol, (*cupri sulphas*,) let it lie as near the fire as a man can bear his hand, till it be thoroughly calcined and turned white; put about eight grains of this into half a pint of water; lay down the tongue with a spatula, and gently wash off as much of the crust as will easily separate, with a fine rag fastened to the end of a probe, or stick, and wet in this liquor, made warm. This operation should be repeated every three or four hours."

In conclusion, and in a postscript, Dr. Dickinson gives the treatment of a brother practitioner, which is reported to be remarkably successful: it is advised in all forms of the disease. This treatment consists of the administration of "a decoction of the root of the dart weed or squaw-root," prepared in the following manner: "He orders about an ounce of this root to be boiled in a quart of water, to which he adds, when strained, a gill of rum and two ounces of loaf sugar, and boils again to the consumption of one-quarter part. This he gives his patients frequently to drink, and with this, orders them frequently to gargle their throats; allowing no internal medicine but this only, during the whole course of the disease, excepting a purge or two in the conclusion."

Veratrum Viride.—In a former item in this *Summary*, reference has been made to the *veratrum viride*. The Journals contain more than the usual amount of original suggestions upon this subject, for this month; and we shall here quote a few remarks and ideas, in addition to the foregoing. In the *Medical and Surgical Reporter*, for Nov. 3d, Dr. B. Woodward has an article upon this subject. From an extensive use of the article, he says, "I am led to believe that its sole

action is upon and through the nervous system, and that, unlike antimony, it has no effect upon the blood." He further says, "I regard it as solely a *nervous sedative*, and in no case a *stimulant*."

Dr. Woodward is of the opinion that the veratrum acts the most decidedly upon the pneumo-gastric nerves. In malarial fevers of a high grade of action, he thinks the quinine will be far more effectual if preceded by a few doses of the veratrum, sufficient to reduce the pulse to the normal standard. "In *pneumonia* and *pleurisy*," he says, "it acts by depressing the nervous action, which concentrates the blood on the lungs and pleura." He would also use it in certain cases of typhoid fevers, and in puerperal fever. "Reasoning from the action of the remedy," he says, "on the nervous system, I have determined to try its effects in the first case of *delirium tremens* which shall come to my hands." We have no doubt of its importance in such cases. Dr. Woodward would also recommend the remedy under consideration in some cases of dropsy, and in some of the sequelæ of scarlet fever.

In the *Atlanta Medical and Surgical Journal*, for November, Dr. H. D. Capers reports a case of hydrothorax, cured, as he supposes, mainly by full doses of the veratrum viride; its action was aided by tinct. digitalis, tinct. cimicifuga, jalap and cream of tartar. Before leaving this subject, we would refer to a few remarks by Dr. J. F. Meigs, in the *Med. and Surg. Reporter*, for Nov. 3d, upon delirium tremens, which, being remotely connected with the subject under consideration, may be appropriately referred to here. Dr. Meigs says, that "sudden death in delirium tremens arises from blood coagula in the heart, and that chronic alcoholism, or alcoholic poisoning, has a tendency to lead to coagulation of the blood." He says further, "the excessive use of opium or alcohol in this disease has been found to be injurious." As we have said before, we would say again, reduce the nervous excitement by the administration of antimony and veratrum viride, and small doses of opium, and, when the delirium is past, give tone to the nervous system by the administration of quinine and strychnine.

Opium.—In the *Med. and Surg. Reporter*, for October 20th, 27th, and November 3d, the paper of Dr. G. Hamilton upon the use of opium is reported, and the discussion which it elicited. We have space only to refer to a very few points in the argument. It is the opinion of Dr. Hamilton, that the cerebrum is the part most affected by opium. It is generally conceded that the secretions are diminished under the use of opium; yet there is one exception to this, which we consider of vast practical importance, and we will state it in the language of Dr. Hamilton. "Perspiration is nearly always *increased*

by a moderate or full dose of opium, and this increased activity of the cutaneous exhalents is generally accompanied by an increased action of the heart and arteries, as is shown in such cases by increased color of the surface of the body." Dr. Hamilton considers the various diseases in which opium is appropriate. We have not space for an abstract. We will only instance peritonitis, dysentery, typhoid fever, and various forms of inflammation. In the discussion upon this paper various distinguished physicians took part. We will here refer to only one idea: Prof. Condie, remarking upon this subject in reference to *congestion and inflammation*, says, that *in congestion of the lungs the administration of opium has always a tendency to increase it*. We very much doubt the correctness of this assertion; we believe that opium has a tendency to relieve all internal congestions. We know of no remedy that will so *increase the cutaneous circulation, and produce free perspiration*, as will opium. In congestion of the lungs, a harassing and perpetual cough but increases the congestion. Opium, by allaying this cough, determining the circulation to the superficial blood-vessels, and the free perspiration consequent upon this, can have no other influence than to relieve the internal congestion. Here we leave the subject, referring our readers to the paper of Dr. Hamilton, and the discussion following, as worthy of attentive consideration.

Varicose Veins of the Leg.—In a former number, we referred to the treatment by subcutaneous ligation, as practiced by Dr. R. J. Levis, of Philadelphia. In the *Med. and Surg. Reporter*, for November 17th, Dr. Levis has an article upon this subject. He regards varix of the leg as, practically, a disease of the *saphena vein*; the proper treatment he believes to consist in the obliteration of this vein. The manner of its accomplishment is described in the paper referred to. He thinks the operation is best performed while the patient is standing. To have the limb at a convenient height, he would have him stand upon a chair or table, and so placed that the patient can steady himself against the wall. He prefers a *round, straight needle*, to the curved needle, or to one with the common surgical-needle point. The vein is found, and the needle is inserted perpendicularly, until it reaches the under service of the vein. The shaft is then depressed, the point passed *under* the vein, and passed out on the opposite side. The needle is now made to enter at the orifice of exit, and passing now *above* the vein, emerges at the point of original entrance. It should have been observed that the needle should previously be armed with a silver or iron wire of small size. The wire is now drawn down upon the vein, tightened, and fastened by twisting. Adhesive or isinglass

plaster is now applied over the wounds, and the limb is bandaged from the toes to the knee. Dr. Levis regards this treatment as eminently successful, and accompanied with no danger.

Chronic Bronchitis—A New Remedy in.—In the *Med. and Surg. Reporter*, for November 17th, Dr. H. Wilson has an article upon the treatment of chronic bronchitis. He regards local medication as of the first importance, and considers in review most of the means, the use of which has been recommended in this manner. Suggesting a new remedy, he says, "For several years past I have been in the habit of using a remedy, which may not be new, but which far surpasses that of any other which I have tried in relieving, and in many instances entirely eradicating, the affection. I refer to the leaves of the common mullein, (*verbascum thapsus*,) dried and smoked in a pipe. In that form of the disease in which there is dryness of the trachea, *with a constant desire to clear the throat*, attended with little expectoration and considerable pain in the part affected, the mullein, smoked through a pipe, acts like a charm and affords instant relief. It seems to act as an anodyne in allaying irritation, while it promotes expectoration and removes that glutinous mucus which gathers in the larynx; and at the same time, by some unknown power, completely changes the character of the disease, and, if persevered in, will produce a radical cure." He says the remedy should be used as indicated above, at least two or three times a day.

Radical Cure of Oblique Inguinal Hernia.—Dr. D. Hayes Agnew has invented new instruments for the radical cure of oblique inguinal hernia. The principle of cure does not differ materially from that put in practice by others: the instruments used may enhance the convenience of the operation. We have not space for a full description. Suffice it to say, that the scrotum is invaginated into the inguinal canal, and is held there, and the canal rendered patent, by an instrument not unlike a bivalve speculum. A long, spear-pointed, curved needle is now armed with a wire, carried up in the groove of the blades, and made to pierce the integuments coming out through the walls of the abdomen. The other end of the wire is now threaded, and the needle is made to pierce again the parts but a short distance from the first insertion. The wire is now drawn down and fastened; the object being to make a plug of integuments filling the inguinal canal. Several stitches are now taken across the canal, in front of the cord, the object of which is to aid the first in retaining the invaginated portion of the scrotum, and thus forming a permanent tegumentary plug, filling the canal, and thus preventing the descent

of the bowel. We condense the above from an article in the *Medical and Surgical Reporter*, for November 17th.

Bearing upon this point, we might remark, that Professor Syme, of Edinburgh, says that all apparatus for this operation is unnecessarily complicated: "A piece of candle," he says, "with a little piece of twine through one end, will answer all purposes."

Belladonna in Sore Throat.—In the *Medical and Surgical Reporter*, for November 10th, Dr. J. W. Thompson has an article upon belladonna. He has used belladonna in inflammation of the breasts with good effect. He dissolves ℥ij. in f℥j. of water, and applies to the inflamed breast. We use the fluid extract without dilution, and it has never disappointed us, when used to prevent inflammation in cases of abortion, or in cases of delivery of still-born children. Neither has it disappointed us in the cure of inflammation of the breast, where suppuration had not already commenced. We have referred to the paper of Dr. Thompson more for the purpose of giving his experience with belladonna in sore throat. He says, "My experience with it in incipient sore throat would lead me to rank it almost as a specific, if used sufficiently early. My plan is to give the sixtieth of a gr. of atropia, and I rely upon it confidently if given within six hours of the first appearance of inflammatory symptoms. I have tried it repeatedly upon myself, as well as others, and yet have to note the first failure." He thinks its beneficial influence is limited to the very early stages of the attack.

Quadruple Birth.—In the *Medical and Surgical Reporter*, for November 24th, Dr. W. L. Atlee reports a case of quadruple birth. Two of the children were girls and two boys. Each child in the uterus was surrounded by a distinct membrane, and each child had its separate liquor amnii. There were three placenta—one larger than the others, to which two cords were attached.

Dyspepsia.—"In cases of dyspepsia, Prof. Pepper is in the habit of using the following carminative mixture with benefit:

R.—Creosote,	. . . . .	gtt. x.	
Sodæ carb.,	. . . . .	3 ij.	
Tinct. zingiber.,	. . . . .	3 j.	
Tinct. cardamom.,	. . . . .	3 j.	
Sacchar. alb.,	. . . . .	3 ij.	
Aquæ cinnamom.,	. . . . .	3 vj.	M.

Dose: a table-spoonful three or four times a day."

A New Method of Amputating at the Hip.—In the *American Medical Times*, for November 3d, Dr. H. A. Potter recommends a new method of amputating at the hip-joint. The incisions are made as in the

usual manner of amputating, at the upper third of the thigh, and the arteries tied. Now a free incision is made from the outer angle of the flaps, to and over the trochanter major, the muscles dissected away from the bone, the capsular and round ligaments divided, and the limb removed.

The advantages claimed are, that the danger from hæmorrhage is materially lessened, and a stump is secured "which he can move with force and facility, and to which an artificial limb may be applied." Dr. Potter has twice operated in this manner, and with satisfactory results.

Obstruction of the Lachrymal Duct.—In the *American Medical Times*, for November 17th, Dr. J. E. Macdonald describes a new method of operation. He says, "I have done away entirely with the director, and only employ a blunt-pointed, narrow, and slightly curved bistoury, the blade of which is only about three-quarters of an inch long, the heel about three-sixteenths of an inch broad, and which tapers to a fine blunted point, a very little probe-shaped. It is sharp on its concave edge, cutting to the point, which is very narrow; and to provide for its strength, the back is somewhat stout, and delicately clubbed at its extremity."

Dyspnœa from Cardiac Disease relieved by the Inhalation of Oxygen.—In the *American Medical Times*, for November 17th, Dr. J. C. Acheson reports a case, in which a troublesome dyspnœa was relieved by the inhalation of oxygen. In the case reported, the pulse was imperceptible, with other symptoms corresponding. He says, "Within fifteen minutes after the patient began to inhale the oxygen, signs of relief were apparent. The restlessness ceased; the breathing became much easier; pulse became perceptible at wrist; intelligence began to return; and waking from his lethargy, he complained of the coldness of his body, and desired more clothing." The patient died, but the benefit resulting from the inhalation of oxygen argued better results in more favorable cases. In extreme dyspnœa, in the last stages of consumption, we have resorted to the inhalation of small doses of chloroform, with very decided benefit.

Salts in Dysentery.—In 1855 we first saw the reported experience of Dr. Dorsey with Epsom salts, united with sulphuric acid and morphine, in dysentery. The reputed success was such that we were induced to give the published formula a trial. We have used it ever since, whenever we have had cases of dysentery to treat. Having seen many severe attacks of dysentery yield kindly under its action, in from 24 to 48 hours, cases that under ordinary treatment would

doubtless have been protracted through three or four weeks, we have let no opportunity pass to recommend its use.

In the *Boston Medical and Surgical Journal*, for November 29th, a nameless writer recommends the following formula:

"R.—Glauber's salts,	. . . . .	3j.
Water,	. . . . .	3iij.
Nitric Acid,	. . . . .
Muriatic Acid, each	. . . . .	3j.
Alum,	. . . . .	℞ss. M.

Dose, a large table-spoonful."

This may be a good prescription, but we much doubt its superiority over the one given by Dr. Dorsey; and, certainly, it is far less pleasant of administration.

Diphtheria.—In the *Cincinnati Medical and Surgical News*, for November, Prof. T. A. Reamy has an article upon this affection. He says he has treated 250 cases, and remarks, "I will here assert, that, in my humble judgment, any one who will, at the very outset of the attack, administer full doses (3 to 6 grs. to children 3 to 6 years old) of sulph. quinine, and continue its use, in connection with chlorate of potash, and apply nit. silver in solid stick locally, avoiding mercurials in any quantity or form, cathartizing as little as possible, will find such success attending his treatment as will lead him, if he had doubts as to the nature and pathology of the disease, to settled and satisfactory conclusions. In many cases, I deem it better to use nitric acid in connection with the quinine treatment, than chlorate of potash."

Pneumonia.—It is interesting to examine the conflicting statements in regard to the modes of treating pneumonia. In the *Georgia Medical and Surgical Encyclopædia*, for October, Dr. E. W. Shafford has an article upon the treatment of pneumonia, in which the following language occurs: "I have much reason to believe that the lancet, judiciously used, followed up properly with antimonials, mucilages, blisters, &c., not only cut short the disease, but is more likely to secure and hasten convalescence. In this view of the subject, I think I am sustained by abundance of statistical reports." When we were in the habit of treating pneumonia with blood-letting, antimony, calomel, &c., we were quite satisfied to be able to discharge our patient in from three to four weeks. Since we have trusted the same cases to veratrum viride, quinine, opium, &c., it is an exceptional case if we are not able to discharge our patient in from ten days to two weeks.

Placenta Hook.—In the forty-fifth number of the *Scalpel*, Dr. E. H. Dixon describes a new instrument of his own invention, for the removal of the placenta, particularly in cases of abortion. It is made

of bird-cage wire, and is quite simple in its construction. He says, "By a simple turn or two, without any special skill on the part of the operator, it completely sweeps the walls of the womb, without the possibility of injuring them by catching in any irregularity or fold of its delicate lining membrane, and is absolutely certain to embrace all within its grasp by giving it a couple of turns precisely as you would do a gimlet." The instrument is made of double wire, with a loop-like hook at one extremity, and a larger loop to be used as a handle at the other.

An instrument figured in the January number of the MONTHLY for 1857, and its use described in an article by H. G. Carey, of Dayton, Ohio, we have often used for the purpose designated by Dr. Dixon. In cases of emergency, where Carey's instrument is not at hand, any person of ordinary skill can, in a minute or two, make such an instrument as is described by Dr. Dixon, and it will doubtless, in judicious hands, serve well the purpose for which it was designed.

Diphtheria.—In the *Kansas City Medical and Surgical Review*, for November, one of its editors, Dr. T. S. Case, has an article upon diphtheria. We take pleasure in giving the treatment of those who have had experience with the disease, be that treatment what it may. In a *typical* case, Dr. Case's treatment is the following: "During the febrile stage, if there be any indication of an overloaded condition of the stomach and bowels, I give an emeto-cathartic; after the operation of which, I direct the use of full doses of Dover's powder to quiet any nervous excitement, to prevent the too free action of the cathartic, and to encourage perspiration. In addition to this, I prescribe, to be taken until the kidneys are acted upon freely, the following mixture:

R.—Spts. etheris nit.,	.	.	.	.	3ij.	
Olei Terebinth.,	.	.	.	.	3ij.	
Mucil. gum. Acaciæ,	.	.	.	.	3vj.	M.

Dose for an adult—dessert-spoonful every hour or hour and a half. For a child, this mixture might be rendered more pleasant by the addition of sugar, &c. After the subsidence of the fever, I immediately commence upon the tonic and stimulant treatment, consisting of beef tea, egg-nogg, &c., *ad libitum*; and in addition, quinine, comp. tr. cinchonæ, muriatic acid diluted and sweetened, chloric ether, carbonate of ammonia, chlorate of potash, &c. These various remedies are to be applied, in quantity and time, as indicated by the condition of the pulse and nervous system." Any person who will take the trouble to examine our *Summary* for the last year, will find the therapeutic experience of the most influential in the profession, whether at home or abroad.

MONTHLY SUMMARY OF FOREIGN MEDICAL LITERATURE.

By DR. L. ELSBERG.

1. *Employment of a New Chemical Compound—Arseniate of Gold—against Cancer.* By Dr. MASSARD. (*Revue de Thérapeutique Medico-Chirurgicale*, Nov. 1, 1860.)
2. *On the Treatment of Ptyalism and Sore Mouth.* By Prof. KNOD VON HELMENSTREIT. (*Schmidt's Jahrbücher*, December, 1860, p. 399.)
3. *Systematic View of all Parasitic Worms found in the Human Body.* By Dr. WEINLAND. (*Wiegmann's Archiv.* XXV., 276–284. *Froriep's Notizen*, 1860, IV., 11, p. 176.)
4. *On the use of Opium in Mental Derangement.* By Dr. LUDWIG MEYER. (*Allgemeine Zeitschrift f. Psychiatrie*, XVII., 4, 1860.)
5. *On Enlargement of the Thyroid Gland during Pregnancy.* By Prof. NATALIS GUILLOT. (*Archives Générales de Médecine*, November, 1860.)
6. *Sulphuret of Antimony in the Treatment of Various Diseases of the Heart.* By Dr. FAUCONETT. (*Gazette Médicale de Lyon*; *Revue de Thérapeutique Medico-Chirurgicale*, Oct. 15, 1860.)
7. *On Transfusion of Blood in Puerperal Hæmorrhages.* By Dr. ED. MARTIN. (Berlin: August Hirschwald. 1860.)
8. *Oil of Sabine in Gonorrhæal Ophthalmia.* By Dr. LUNDA. (*Wiener Med. Wochenschrift*, November 24th, 1860.)
9. *Means of Preventing Death from Chloroform.* By JAMES PETRIE, M.D. (*Medical Times and Gazette*, December 22, 1860.)
10. *Lectures on the Diagnosis and Treatment of the Principal Forms of Paralysis of the Lower Extremities.* By Dr. C. E. BROWN-SEQUARD. (*Lancet*, December 22, 1860.)

1. [We doubt not the whole profession of this country will join us in hailing Dr. Massard's contribution to knowledge in regard to the treatment of that terrible and intractable disease, cancer. Quackery, pretension and humbug have so often, however, deluded the world into the temporary belief in some vaunted "cancer cure," that we should be exceedingly careful "to have a reason for the hope that is within us." We should like to give this new chemical compound a fair trial, and wish every physician in the land could and would do the same. *A priori*, we must state that we have long employed the chloride of gold, topically, and the *aurum muriaticum natronatum*, (the chloride of gold and sodium,) internally, in the successful treatment of indurations of the os and cervix uteri, which many physicians would doubtless have pronounced cancer. If the properties and powers of arseniate of gold really are what Dr. M. believes them, we would suggest its employment, too, in constitutional syphilis, and other systemic vices. His conclusions are, however, as yet not positively decisive enough, and must be confirmed by other observers.

We translate for our readers the main points only.] Arseniate of gold is a new remedial agent. It belongs to the class of *alteratives*. It acts profoundly, finally, and permanently on *nutrition*, modifying it, or impressing not only the organ of this function, by a sort of elective action, but the great organic systems: innervation of the digestive apparatus and of the muscles of the life of relation is increased (nervous system); the morbid secretion of bronchitis concomitant with phthisis and that of tuberculous cavities is lessened; cancerous tumors undergo resolution, i. e., a normal softening; the sanguineous capillaries color the skin with the characteristic color of health (lymphatic system, sanguineous system.)

Arseniate of gold is prepared by shaking together a solution of pure chloride of gold and a solution of arseniate of potash, allowing the mixture to stand for 24 hours, filtering and drying the precipitate. On account of its insolubility in water, arseniate of gold may be given in the solid form. The maximum dose that has as yet been ventured upon, is two centigrammes a day, in two divided doses. The dose ordinarily commenced with, is three to four milligrammes a day. After every two or three days, a milligramme more per day is ordered until the maximum dose is reached, which is then continued for several months. Toxic effects have never yet been observed. The author promises soon to give a complete treatise on the subject.

2. As long ago as 1832, has Prof. Helmenstreit published an article on iodine as a cure for ptyalism and sore mouth. The many failures reported, he ascribes entirely to a departure from his directions, and especially to the employment by many physicians of a mixture of iodide of potassium, instead of iodine alone. He has always recommended one or the other of the following formulæ, viz.:

R.—Iodinii pur.,	gr. v.
Spts. vini,	3 ij.
Aq. cinnamomi,	3 iijss.
Syr. simpl.,	3 ss.

M. S. A table-spoonful four times daily. Or,

R.—Iodinii pur.,	gr. vj.
Extr. gentian. rubr.	3 j.
Mucilag. gum. arab., q. s. ut fiant pil.	xxiv.

S. Three pills four times daily. In severe cases, the dose of iodine had better be somewhat increased.

3.—I. *Cestoidæa*.—Bothriocephalus latus in the small intestines, Switzerland, Russia, France, almost never in Germany, England, Holland, North America; Tænia solium in the small intestines, Germany, Eng-

land, North America, Italy, France; once found in a Negro, who also had *Cysticercus cellulosæ* in brain and eye; a *Tænia* in a Hottentot on the Cape; *Tænia mediocanellata* in Germany and North America; *Cysticercus tenuicollis* in the liver; *Echinococcus hominis*, mostly in liver and pancreas, Iceland, North America; *Echinococcus veterinorum* seldom; *Cysticercus acanthotris* in the muscles of a woman in Virginia; *Tænia nana* in an Egyptian; *Hymenolepis flavo-punctata* in a child in Massachusetts. II. *Trematoda*.—*Monostoma lentis* once in Berlin, in the lens; *Distoma hepaticum* in the gall-bladder; *Dicrocoelium lanceolatum*; *D. heterophyses* in the intestines of Egyptians; *D. oculi humani* once in the eye of a child; *D. Buskii* in the intestinal canal, in London; *Schistosoma hæmatobium* frequently in Egypt, in the veins of the liver; *Hexathyridium pingucola* once in Germany; *H. venarum* once in Germany and Sicily; *Tetrastomum venale* in Sicily. III. *Nematoidea*.—*Ascaris lumbricoides* common with Europeans, North Americans, Egyptians, and Ethiopians; *A. alata* in small intestines in Ireland; *Oxyuris vermiculata* common in the rectum in Europe, Egypt, North America; *Strongylus gigas*, seldom, in the kidneys; *Str. longevaginatus* once in Siebenbürgen, [an Austrian province;] *Ancylostoma duodenale* in the duodenum, in Italy and Egypt; *Trichocephalus dispar* in the cæcum and colon, in Germany, Africa, North America; *Trichina spiralis* in the muscles, in Europe, North America; *Spiroptera hominis* in the bladder; *Filaria medinensis*, in Africa; *F. oculi humani*, in Germany; *F. hominis bronchialis*, in Germany. Altogether, therefore, 32 species.

4. Dr. Meyer's article is very able, elaborate, and practically valuable. He has come to the conclusion that opium is useful in puerperal mania, in hysterical alienation, in all forms of insanity which are connected with the sexual organs; and in those which appear in the course of certain acute diseases, as variola, acute rheumatism, etc. He recommends doses of two to three grains of opium every two hours, and in cases where the internal administration of the remedy is not advisable, the injection of a solution of morphia into the cellular tissue, viz., the "hypodermic method."

5. M. Guillot observes that he has not infrequently remarked hypertrophy of the thyroid taking place in pregnancy, and quite independently of the conditions usually considered to be favorable to the production of goitre. The affection is usually not dangerous, but two cases which have come under the author's notice prove that it may prove perilous to life itself.

(1.) A lady, 30 years of age, in easy circumstances, and of excellent

health and constitution, found her neck, during a first pregnancy, become the seat of a slowly increasing enlargement; but as she suffered little inconvenience from it, she paid but little attention to it. During a second pregnancy, in 1855, the tumor increased again, and became troublesome. After suckling had ceased, and the menses had returned regularly, the tumor continued its increase, giving rise to much pain, facial neuralgia, palpitations, vertigo, and suffocative asthmatic paroxysms. The author saw her, with M. Trousseau, in 1858, when the tumor, of about two decimètres in diameter in all directions, was found to be indistinctly divided into two lobes, its consistency being that of a lipoma, without irregularities, and the skin covering it being healthy. On compressing it, great embarrassment of respiration was produced. A few days after the consultation, the patient having become nearly asphyxiated during an attack of dyspnœa, laryngotomy was performed, with immediate relief. The patient, however, died two days afterwards, and no autopsy was permitted.

(2.) A young woman, aged 29, of good health and constitution, had perceived after her first pregnancy, four years ago, that her neck became larger, but she paid little attention to it. She was delivered of her second child nineteen months since. At the anterior part of the neck was a voluminous tumor of about thirty centimètres in circumference, extending from the thyroid cartilage to the sternum, and covered by healthy and moveable skin. Her respiration and voice were embarrassed, and she was liable to suffocative paroxysms. All these symptoms gradually came on from the time of the first pregnancy, undergoing especially increase from that of her second. After she had been a week in the Necker Hospital the paroxysms of dyspnœa became more and more urgent, until at last one terminated fatally. The thyroid had nearly acquired the size of a human brain, and of course exerted great pressure on surrounding parts. The tissue of the gland, healthy in appearance, still was remarkable in various particulars. In the normal state, the frame-work of the thyroid consists of a fibrous tissue but of slight density, constituting a multiplied series of little cellules lined by a very delicate epithelium. Within these cellules is contained an alkaline, albuminous liquid, in which are swimming vesicular globules, and well-rounded cells or molecules with or without nuclei. But the consistency of this tumor was more firm than normal, on account of its abundant fibrous tissue forming large, thick, multiple partitions, this density being still not so great as that of ordinary fibrous tissue. Its intimate structure resembled that of normal fibrous tissue. The little cavities or cellules were increased in size at some

points to three centimètres, and at others to two or three millimètres. The minuter cellules possessed an epithelial covering, but the larger cavities did not. Beyond the increased volume produced by the excessive accumulation of the elements of the thyroid, all was in its normal state, with the exception of the absence of epithelium in the enlarged cellules. The lesion is therefore a hypertrophy of the fibrous and granular elements constituting the organ.

Supposing this to be a correct representation of what takes place in other cases of enlargement of the thyroid during pregnancy, the author is disposed to regard it as only one of the manifestations of the excessive production of fibrine during pregnancy. To this is in great part due the progressive development of the uterus and mammary glands. The frame-work, with each of its proper elements, exists in the latter for example; but in insufficient quantity, and for the secretion of milk to become accomplished, it is necessary that these anatomical elements should be increased, such secretion not taking place from the mere afflux of blood, but in proportion to the new mass of additional organic elements. These are the utricles or terminal cells of the galactigenous canals, and the fibrous tissue serving as a support, and common bond of union for all these utricles. Just as we can appreciate the incessant increase and accumulation of the galactigenous vesicles, we can estimate that of the generative nuclei of the fibrous tissue, until the fibrous network of the organ comes to occupy a considerable and highly important position in the constitution of the organ. Other signs of increased production of fibrine are found in the accidental osseous growths, accompanied by a thickened periosteum, which are found sometimes within the cranium or pelvis of pregnant women. Without adverting to the demand for such tissue in building up the fœtus and its membranes, we may refer to its prevalence in the development of the round ligament. "Being in the habit of endeavoring to trace out the mutual relations of pathological phenomena, and being convinced that most of the facts of detail are but the expression of a unity which the practitioner should seek to discover, I have endeavored to bring these particularities together, which, perhaps, after all, though produced simultaneously, may not be united by any appreciable tie. However, this simultaneity of production, amidst a common general condition, has struck me; and this is why, although with much reserve, I have been led to state that the hypertrophy of the thyroid body, during pregnancy, is one of the consequences, as it is one of the proofs, of the energy imparted to the fibrous elements of the system."

6. [Many of our readers may know that sulphuret of antimony was a favorite remedy formerly, against gout, rheumatism, scrofulosis and chronic exanthemata. It has also been used in epilepsy, and as a febrifuge; in the former, and as an alterative in skin diseases, we remember to have used it in two or three grain doses, three times daily, long ago. We have never been able to derive, as far as we know, the slightest benefit from it. Dr. F. in the following article has not stated the dose he used. The dose stated in the books is from two to twenty grains. It should be borne in mind that it is never free from arsenic.] I suffered, says Dr. Fauconnet, since my eighteenth year from disease of the heart. Violent exertion had been the cause, and all sorts of excitement, so natural at that age, kept up the disease. During fifteen years following, I tried, without improvement, blood-letting, leeches, baths, digitalis, water as exclusive beverage, moderated diet, etc., etc., etc. At the age of 24 years, I was attacked with intermittent fever, for which I employed every remedy I could get knowledge of; in spite of which, gastric pains, added to the recurring marsh fever, rendered existence burdensome. More than twenty-five years after, notwithstanding my removal from the place of contamination, I still had occasional gastralgia and attacks of fever, while the cardiac affection was unchanged. At the age of 50 years, and against these obstinate febrile paroxysms, I resolved to employ sulphuret of antimony, and before long I experienced most happy results from its use. What I had most feared, aggravation of the gastralgia, did not take place; on the contrary it lessened. The fever soon moderated, afterwards ceased, not to return. The pains at the heart, palpitation, etc., lessened; and after two months' employment of the remedy, I find myself in a far more satisfactory state of health than I have once enjoyed in thirty years.

Dr. F. then reports the history of a case of neurosis of the heart, of another of rheumatic endocarditis and hydropericarditis, and of a third case of rheumatic affection of the heart, with sanguineous concretions of recent formation, all three of which were cured with sulphuret of antimony.

7. We regard Dr. Martin's the most complete monograph on the subject ever published. Right gladly do we take the trouble to present our readers with an analysis of the most striking points. In September, 1825, James Blundell performed the first successful operation of transfusion on a woman dying from postpartum hemorrhage. Since then, transfusion has been performed fifty-seven times in obstetrical practice, with forty-five recoveries, under circumstances in which

the most experienced physicians could not but pronounce death inevitably at hand; while even, in most of the remaining twelve cases, the fatal issue was brought about by diseases and occurrences which had no connection whatever with the operation. Whether the transfused blood acts by *restitution*, as absolutely supplying the lost blood, or by *stimulation* of the walls of the vessels, and especially the heart, so that its activity is prolonged until the lost quantity of blood is otherwise reproduced, has been the subject of much contention. The truth seems to be, that the two *modi operandi* co-exist—the latter, *i. e.*, the stimulation, being the most important. It has also been proved that the corpuscles of the blood are the proper restorators, while the serum assists their action very much.

The dangers of transfusion have been greatly exaggerated. That death results from injecting blood corpuscles of a different form or size than those in the species to which the subject of the operation belongs, needs no consideration here, since only human blood is to be transfused in exsanguious puerpera. Altogether, faulty methods of operating, selecting the blood of greatly excited or otherwise abnormally affected individuals, &c., must also here be excluded. Even the danger of entrance of air into the vessels can be suspected in but a single case out of the fifty-seven; and in this case, transfusion was practiced by opening the *jugular* vein; while when choosing the proper vessels, (the cutaneous veins of the arm,) with the proper precautions, the danger of its occurrence must be regarded as very small—owing, perhaps, to the entrance of an amount of air insufficient to produce dangerous symptoms, or perhaps to its entrance being so gradual, and its mixing with the blood so intimate, before reaching the heart, as not materially to interfere with normal circulation. The possibility of coagulation of the blood, with the dangerous consequences of thrombosis and emboly, has not in practice proved as likely to occur as it was ever feared; and the danger of inflammation of the vein at the place of injection, though it has occurred, (as phlebitis has, however, also occurred after simple venesection,) is, as all the other dangerous consequences of transfusion, *insignificant* compared with its value in saving the life of the exsanguinated.

As to the indications in obstetrical practice:

“ *Whenever, with the presence of symptoms of great exsanguination—general pallor of the skin, cold extremities, small, almost imperceptible pulse, attacks of fainting—restoration through the alimentary canal is rendered impossible, by vomiting up of the remedial and nutritive substances, by inability of swallowing, by severe gastric catarrh, &c., the*

time has come for transfusion, and I advise not at all to delay this almost dangerless operation." The continuance of flooding—provided nothing else is neglected to stop it—is no contra-indication, but rather the reverse.

For the performance of transfusion Dr. Martin recommends—besides a lancet or bistouri for the incision in the skin, and a glass syringe, seven inches long, amply holding two ounces—a slightly curved trocar, four and a half inches long, (three of which is handle,) the end of the silver canula, receiving the point of the syringe, being funnel shaped, and covered with a thin plate of caoutchouc. "Having determined on the operation, choose a strong, healthy and willing man, or in the absence of such, a healthy, resolute, not frightened or depressed female, from whom to abstract the blood, and one or more intelligent assistants. Having procured a basin with clear, warm water, of 100° to 104° F., and a smooth porcelain cup, to catch the blood, fill the glass syringe, as well as the cup, with warm water, or immerse the latter in the basin. Then, during the same time that you lay bare the median, or if that should appear too small, the cephalic or basilic vein, by means of a cutaneous incision, one to one a half inch long, and introduce the trocar half an inch, in the direction towards the heart, into the vein, (which may to this end be raised a little by means of a couple of threads drawn underneath)—let an assistant perform venesection on the arm of the individual whose blood is to be transfused. Now, while the blood is running into the emptied cup, which may still be allowed to float in the basin, empty also the syringe of the warm water, and at once take up the fresh blood from the cup, being careful to see that the blood in the glass is liquid, and not frothy. Without hesitancy, place the point of the filled syringe in the funnel-shaped caoutchouc-covered opening in the trocar canula, which is fixedly held in the vein by a reliable assistant, after removing the stilet, and slowly push the piston inwards. After removal of the syringe, be sure to cleanse it immediately with warm water, unless you think it advisable to refill it at once with the still flowing blood, and to repeat the injection immediately. Examination of the pulse and heart, and observation of the features, assures us of our success. Should this not yet be complete, the whole procedure is to be repeated, after taking care to have no coagula in the syringe or in the canula. Since it is not always easy to find the median vein, it being collapsed in the exsanguious, it may sometimes become necessary to look for it on both arms; and it has occurred, and without injurious consequences, that transfusion was performed first on one arm and then on the other.

"Having transfused the necessary quantity of blood, the canula is removed from the vein, and the wound dressed, just as after common venesection. It is, of course, understood that the greatest attention must, for some days, be bestowed upon this little wound; that the first symptoms of inflammation must be met with cold applications of lead water, or snow, ice, &c., &c., and that, altogether, the patient must be carefully watched in every particular."

The valuable work before us concludes with the lithographed representation of the trocar (natural size). The following is the systematic division of the matter we have just briefly analyzed:

I. Historical observations on transfusion in general and transfusion in exsanguious puerpera in particular. II. A case of successful performance of transfusion. This is the relation of the very interesting case which led to the preparation of the monograph. We gather that it was performed by the author at Jena, on the 23d of February, 1857, on account of flooding in consequence of placenta previa in a primipara, æt. twenty years; the symptoms being—extreme general pallor, coldness of extremities, pulse hardly perceptible, and persistent gastric catarrh preventing restoration by internal remedies. Four to five ounces of blood, from the left median vein of a strong young man, were transfused into the left median vein of the patient. III. Tabular view of the known cases of transfusion in obstetrical practice. IV. On the action, or *modus operandi*, of transfusion. V. On the dangers of transfusion. VI. On the indications of transfusion in obstetrical practice. VII. On the performance of transfusion.

In conclusion, the author expresses the hope—which we sincerely trust and feel convinced will be richly realized—that his essay may be instrumental in saving the lives of some of the many women who, in the bloom of their years, are brought to the verge of the grave by hæmorrhage, and now so often perish !

8. Confirmed by sixteen cases, Dr. Lunda strongly recommends the application of the oil of sabine to the conjunctival surface of the upper eyelid, as the best means of removing the diseased condition of this part resulting from gonorrhœal ophthalmia, the acute inflammation having subsided. It causes great smarting and hyperæmia, but these soon pass off, and the rapidity of the cure obtained is very great.

9. Ascribing the death from chloroform, during surgical operations, most frequently to the position of the patient, "which is most generally prone with the face turned upwards, and in consequence of which, when the insensibility is complete, and irritability no longer exists, the tongue by its own weight falls back, carries the epiglottis close down

on the top of the windpipe, and so closes the glottis, when inspiration ceases, and asphyxia is the result in a very short time." Dr. Petrie insists on such a lateral or other position of the head, that the tongue be prevented from falling back so as to impede respiration. It may become necessary to draw out the tongue, when sunk already deeply into the fauces.

10. In the last number of the *Lancet*, Dr. Brown-Séquard's most valuable course of lectures is concluded. We have space here to report only the general conclusions, viz.: "Our principal object in these lectures has been to show—

(1) That there is a form of paralysis of the lower limbs entirely distinct from all others, as proved by its mode of production, by morbid anatomy, by its symptoms, and by the influence of a certain mode of treatment, and that this form of paralysis fully deserves the name of reflex paraplegia.

(2) That the reflex paraplegia may be caused by the most various irritations of the skin, the mucous and serous membranes, the abdominal or thoracic viscera, as well as of the genital organs or the trunks of the spinal nerves.

(3) That most cases of paraplegia can be placed in two groups, entirely different one from the other, according to the existence or the absence of symptoms of irritation of the motor, sensitive, and vasomotor nerve-fibres.

(4) That most of the therapeutical means to be employed in paraplegia are also to be grouped in two categories, one of which is fitted to those cases in which there are symptoms of irritation, and the other, to those cases in which these symptoms do not exist."

REVIEWS AND BIBLIOGRAPHY.

On Obscure Diseases of the Brain and Disorders of the Mind: their Incipient Symptoms, Pathology, Diagnosis, Treatment, and Prophylaxis. By FORBES WINSLOW, M.D., D.C.L., Oxon, &c. Philadelphia: Blanchard & Lea. 1860.

This work is an attempt on the part of its distinguished author to elucidate some of the obscurities surrounding cerebral diseases, especially in their inception and development. The prayer for light in this direction is universal with the profession, and any answering book bearing this blessing on its leaves, will be most acceptably received.

The diseases and structural changes of the brain, like those affecting other organs of the body, are, in a majority of cases, marked by premonitory symptoms that are appreciable and of diagnostic value. We may not always be able to ascertain the precise pathological change in progress, or even its locality, but the author thinks the general questions—whether the brain itself is the seat of the disease, and whether such disease be sympathetic or idiopathic in its nature—capable of an early solution.

Results of great practical value would, of course, follow the prompt recognition and early treatment of these affections of the brain, not less in the avoidance of many of their suddenly fatal terminations, than in the prevention of a vast amount of chronic and incurable insanity.

In the present work, the author contents himself with a general description of the character of their symptoms as respectively manifested by the intelligence, by the functions of motion and sensation, by the special senses, by sleep and dreaming, and by the functions of organic and nutritive life. In a final chapter, he discusses the general principles of the pathology of the brain, and of the treatment and prophylaxis of its diseases and disorders.

Viewed merely as introductory to subsequent treatises in which the symptoms here generally considered will be especially referred to specific types of cerebral disease, and their value as diagnostic elements, so far as possible assigned them, the present volume is entitled to its certain position and share of praise. It would be regarded differently, however, did it come to us as a distinct and systematic work upon the subject of which it treats.

Strictly speaking, it is not of this latter character; and the student, anxious as well for the manner of his advance towards knowledge as for the knowledge itself, will not be pleased with its loose arrangement, its repetitions, its discursive character, and that so little really available remains to him after its perusal. While, with the general reader, he will be interested in the remarkable cases so dramatically told in its pages, he may perhaps question whether the curious and extraordinary in cerebral any more than other glandular diseases, are the most profitable for study or illustration.

There is also a seeming disposition towards sensational effects in the headings of the several chapters, and a kind of rhetorical fullness about their contents, which, however natural to the author's style, disturbs any quiet estimate of their scientific value. Hence, we can conceive how much more attractive this work will be to the popular many than to the professing few of psychological medicine. We feel certain, more-

over, that the mystery so commonly associated with affections of the brain, and the exclusiveness that tends to remove them from pathological or therapeutical fellowship with other diseases of the body, will suffer from the teachings of our author no peculiar abatement. In making these remarks, we do not deny that the work contains much that is valuable, practical, and suggestive of attainable progress in the diagnosis and treatment of these affections; but we find it badly arranged, and overlaid with much irrelevant matter. It seems, indeed, as if the book had been constructed not logically *out of* its subject, but had been written *up to* and around one or two nuclei chapters previously on hand, and eked out by a general chapter on the pathology, treatment and prophylaxis of cerebral disease. In no other way can we account for its patchworky character.

The final chapter contains, as we have said, some general observations on the principles of treatment. We abstract a few of these, not indeed as being novel or different from those generally accepted by the profession at the present day, but simply that our notice, like the author's book, may have a sort of practical conclusion.

In acute affections of the brain and mind, the life and cure of the patient depend upon the speedy detection of incipient symptoms, accuracy of diagnosis, and immediate application of remedial measures. The condition of the general health of the patient must be carefully considered, and any local cause for the cerebral disorder looked after. In violent maniacal excitement, leeches, cold to the head, prolonged hot baths, and careful administration of antimonials and purgatives are preferred to active depletion.

In cases clearly associated with depressed vital powers, morphia with iron and quinine are indicated. The separation of the patient from his friends and family, and the exercise by the patient himself of his own power of self-control over his own delusions or insane thoughts, are often of great advantage in the incipient stage of disordered mind.

The author believes much may be effected by means of early treatment to arrest the progress of organic cerebral disease. The abstraction of small quantities of blood from the head, mercurial alteratives, attention to the state of the secretions, skin and renal functions, combined with counter-irritation and abstinence from all mental agitation and anxiety, are often found, at this stage, of essential benefit. Certain other types of incipient apoplexy and paralysis are only to be treated by means of tonics and stimulants, perseveringly continued, together with the use of setons or issues. In some of these cases con-

nected with organic or functional disease of the heart, after the head symptoms have been relieved by the local measures alluded to, great benefits may result from a combined use of opium, digitalis, and iodide of potassium.

The author thinks a vast amount of organic cerebral disease and mental disorder may be traced to mechanical injuries or blows upon the head, previously received and perhaps neglected at the time. Hence all such cases should be vigilantly watched, and their cerebral symptoms anticipated by timely remedial measures. These measures consist in local abstraction of blood, by means of leeches applied over, or in the immediate neighborhood of the seat of the injury; and in some cases of severe cranial injury, a seton should be applied to the nape of the neck and issues in the scalp.

Impairment of the attention, resulting from a morbid condition of cerebral health, is often benefited by a stimulating plan of treatment with tonics.

Impairment of the intelligence, with active head symptoms indicating the existence of capillary congestion, is to be treated by judicious local depletion and counter-irritation. Oftentimes, in these cases, strychnine is indicated, as well as the different preparations of arsenic, iron and copper. The author is of the opinion that the therapeutical value of arsenic and copper is not sufficiently appreciated in affections of the brain and nervous system, particularly if associated with states of vital depression.

Impairment of the memory, when the result of acute disease of the brain, can only be benefited by a course of treatment which has reference to the cause upon which it depends. In exhausted conditions of the nerve and vital force, stimulants occasionally are beneficial to revivify the power, while in less acute conditions judicious attempts to restore it by proper exercise may be found advantageous.

The moral treatment of incipient types of insanity is reserved for fuller and more detailed exposition in that subsequent volume so constantly referred to as soon to follow, and supply, as we hope, whatever has been too cursorily or generally treated in this.

In the mean time, let us find for the present volume a sufficient merit in the fact that it stirs up the attention of the profession to a closer watchfulness of the first premonitory symptoms of cerebral diseases, and will thus lead to an earlier and more effective treatment of them than now prevails.

Compendium of Human Histology. By C. MOREL, Professor Agrégé à la Faculté de Médecine de Strasbourg. Illustrated by 28 Plates. Translated and edited by W. H. VAN BUREN, M.D., Professor of General and Descriptive Anatomy in the University of New York, &c. New York: Baillière Brothers. 1861.

This work of M. Morel, which has been presented to the American student by Prof. Van Buren, has received the unqualified approbation of the French press. It is a concise *exposé* of the present condition of histology, the author not proposing to give an original work, but rather one that would include within its pages a brief and explicit outline of the various facts which recent researches had established.

Within the 200 pages which comprise the book are given, in separate chapters, short histories of the following subjects, in terse yet clear descriptions: 1. Cells and Epithelial Membranes; 2. Fibres—Connecting Tissue; 3. Cartilage—Bone—Teeth; 4. Muscular Tissue; 5. Elements of Nervous Tissue; 6. Vessels—Arteries—Veins—Capillaries and Lymphatics; 7. Glands; 8. Skin and its Appendages; 9. Intestinal Mucous Membrane; 10. Organs of Sense.

The title "Connecting Tissue" is used in this work as a synonym of cellular, areolar, or filamentous tissue, and is thus described by the author: "The essential elements of connecting tissue are fibres and cells. Its fibres are of two kinds, viz.: connective fibres properly so called, and elastic fibres. Its cells are diminutive in size, generally branched, but somewhat fusiform, and have received from Virchow the name of *plasmatic* cells."

The author adopts in this work many of the views of M. Virchow announced several years ago in his lectures at Wurzburg, and more recently in his work on "Cellular Pathology;" and it is in this chapter on Connecting Tissue that these views are more particularly made manifest. In the chapter on Cells, the author says: "Every cell must derive its origin from another previously existing cell;" and in his description of the development of connecting tissue he holds the following language: "The fibres of connecting tissue develop themselves from cells of the simplest form, which commence the process by assuming the elongated shape, then join each other—end to end—and gradually break up into fibres within; so that each row of cells, thus attached by their extremities, is developed into a bundle of connective fibres. Whilst the majority of the original cells are thus transforming themselves into connective fibres, others assume a star-shape, sending out branching processes, which, joining themselves to similar

prolongations from neighboring cells, produce, after the disappearance of their nuclei, elastic fibres. The cells heretofore called 'plasmatic' are nothing more than the star-shaped corpuscles just described, before taking on their final transformation into elastic fibres."

The cellular origin of all the tissues are in their turn explained in few words, yet quite sufficient to give the student a clear idea of the philosophy which dominates the whole book.

Twenty-eight carefully executed plates at the close, with numerous references in the text, materially aid the reader in understanding the new theories here advocated, without compelling him to have recourse to the microscope, unless to substantiate the faithfulness of the designs.

The labor of translation has been most admirably performed, notwithstanding the difficulty of transferring the close didactic language of the original into another tongue. There is hardly an instance in which the fact of its being a translation would be detected by the reader, where he ignorant of the fact.

We think the editor has done a service to the profession of the country in preparing this book, and we have no doubt it will increase the interest in histological science, which is now so earnestly pursued in Europe, and so little regarded here.

A translation of the work of M. Virchow, alluded to in this notice, is now in press in this city. The present volume is making the road easy for a better knowledge of the peculiar views of the distinguished professor of the University of Berlin upon the cellular origin of the tissues, which is now attracting so much attention and so much discussion among the histologists of Europe.

Lehrbuch der Augenheilkunde, von DR. JOSEF PILZ, K.K.A.O. Professor der Augenheilkunde an der Prager Universität und Königlich Böhmischem Ständischem Augenarzte. Mit 267 schwarzen und 137 colorirten Abbildungen. Prag, 1860. Verlag von Karl André.

(A text-book on Ophthalmic Medicine and Surgery, by Dr. Joseph Pilz. Prague: Karl André, 1860.)

This celebrated work is now completed. Parts VIII.-X. have just reached us, bringing the finished book up to 1024 pages. Since our first acquaintance with it, (made in Europe a couple of years ago,) we have anxiously looked for both its completion and translation into English. That it is the best—nay, the *only real*—text-book extant

on the subject, no one can deny; but it must so much more be regretted that its distinguished author (who, during its publication, was made Professor Extraordinary of Ophthalmology at the Prague University)—“aided by his many years’ observation and experience, familiar with the literature of the subject, far from any polemic tendency, ever mindful of the motto ‘suum cuique,’ able to test and appreciate the results obtained by others without prejudice”—should have taken no notice of the progress of his favorite branch in this country. This omission has caused in some places, more especially in the “Operative Part,” defects, some of them serious, which, in view of the author’s high position, and the freedom of interchange of the German with the American and English press, are inexcusable.

The work is divided into three parts, viz.:

I. The *Propædeutical*, subdivided into two sections, of which the first presents not only the anatomy and physiology of the eye, and the physical laws of sight, but also a view of the progress of the physiological and physical sciences in relation to ophthalmology: Chap. 1st, descriptive anatomy and histology; 2nd, physiology of seeing; 3d, the hemostatic relations of the eyeball; 4th, physiology of the eyelids and of the lachrymal apparatus; 5th, the laws of development of the human eye, (the second section presenting clearly and in detail the rules and aids for examining the diseased eye.) Very numerous woodcuts in the text, and colored lithographs and steel engravings on extra plates, fully illustrate every subject.

II. The *Pathological-therapeutical*, embracing the description, representation (by splendid colored original drawings, perfectly true to nature in every respect) and treatment of the diseases of the eye, with special regard to differential diagnosis, pathological anatomy, and ophthalmoscopic observation. Diagnosis is advanced by a critical appreciation of symptoms; and teaching, with but few exceptions, the corresponding most important methods of treatment, as based upon observation and experience, rationally scientific, and free from all empiricism, the author’s therapeutics generally satisfy the claims of rational physiology and pathology.

III. The *Operative*, most graphically describing the methods of the best European surgeons, with the illustrations reduced to one-third the natural size.

There is no other book from which the general practitioner or the young physician can so surely reach the “stand-point” of ophthalmology, or follow its rapid strides of progress up to the present time. The same difficulty which we at first and long experienced has un-

doubtedly been felt by all. "How shall we, after only our general medical education, master the knowledge of the physical sciences now necessary to understand the acquisitions in ophthalmoscopy? How much time must we sacrifice to a repetitive and special study of physiology to become able to appreciate and apply the useful in ophthalmic pathology and practice? How shall we obtain the results of pathological anatomy and microscopy valuable for ophthalmic diagnosis and therapeutics?" We are blessed here with a special and most excellent school for ophthalmology; but spite of the republication of the works of Mackenzie, T. Wharton Jones, Lawrence, Walton, Dixon, &c., we have no text-book entirely to answer its ends. The questions proposed are satisfactorily solved, *truly* solved, in the work now before us. It is distinguished from all similar books, not only by its text, but by the absolute faithfulness to nature of its pictorial representations. We see the appearances as we do in reality, in practice, in the largest possible ophthalmic hospital, and can view and study them at our leisure.

No more acceptable service could be done a large portion of the profession of this country, than by the publication of "Pitz on Ophthalmology," *edited*—not merely translated—by a competent American ophthalmologist.

L. E.

Clinical Lectures on the Diseases of Women and Children. By GUNNING S. BEDFORD, A.M., M.D., Professor of Obstetrics, the Diseases of Women and Children and Clinical Midwifery, in the University of New York. Sixth Edition, carefully revised and enlarged. New York: S. S. & W. Wood. 1860.

These lectures of Professor Bedford are so well known, that it is not necessary for us to enter into any detailed analysis of them in order to inform our readers of their contents.

Within a very few years the work has passed through six editions, and within the last year has received the honor of being translated into French by M. Paul Gentil.

The colloquial style in which the lectures are written, and which has been variously regarded by critics, would seem to be the natural attendant of the time and place of delivery. Taken down originally by some of the audience, and appearing in a medical journal, in the exact phraseology in which they were uttered, they here reappear in book form with all the peculiarities of style incident to a clinical lecture. Doubtless the author could have modified this in revising the

lectures preparatory to publication in a volume. In doing so, however, the character of the volume would have been changed; it could no longer have been called clinical lectures, but rather a treatise.

After all, style in writing, when rules of syntax are not violated, is a matter of taste. The lectures before us are open to the criticism which taste might dictate, yet they contain so much that is useful, that eccentricities in the former may be excused in the abundance of practical suggestions found upon almost every page.

The volume contains thirty-one lectures, upon a great variety of subjects, without order or natural arrangement, the cases reported being those which appeared at the clinic of the University Medical College held by the Professor of Obstetrics, as they presented themselves.

It closes with several pages of select formulæ of remedies, and a copious index to the subjects treated upon in the text.

EDITORIAL AND MISCELLANEOUS.

— *Le Roi est mort—Vive le Roi.*—The labors of one year are closed, those of a new year are begun. We are happy to renew our congratulations at this season to all those who have for a series of years sustained us in our journalistic venture, and to those we meet for the first time upon the anniversary of a new year we give greeting.

The past year was an eventful one. Progress the watchword on every side. Our profession has in no wise been an exception. The researches of the anatomist, the physiologist, the pathologist, have been renewed day by day, and all directed to a better understanding of the laws of life, and a more thorough elucidation of the phenomena of disease.

We have endeavored to keep apace with the result of these researches, and to present the readers of the MONTHLY as complete a resumé of the progress made in our profession as our own pages would admit. We shall continue to act as faithfully as we can in preparing a monthly record of the most prominent advances made by laborers in all branches of the profession throughout the world, giving a large share of attention to the practical works of our own countrymen.

Many improvements we hope to make during the present year, in

the journal. We point to our past labors as an earnest for the future, and call upon our friends for aid in carrying our plans into successful execution.

— Soon the Winter Sessions of the Medical Colleges will close, and students will be searching for instruction during the spring and summer months. We would call their attention to the announcement of the Long Island College Hospital, which will begin its session on the 18th of February, and continue till the middle of July. During the preliminary course, lectures will be given on the following subjects: *On Military Surgery*, by Prof. HAMILTON; *Light*, by Prof. DOREMUS; *The Operative Surgery of the Eye*, by Prof. HUTCHISON; *Unity of Type in the Vertebrate Animals*, by Prof. ENOS; and *The Physiology of Plants and Pharmacy, in relation to Therapeutics and Materia Medica*, by Prof. CHAPMAN.

The advantage of clinical lectures by the bedside is afforded in this institution through the wards of the hospital connected therewith. Attendance upon the hospitals and other public medical charities of New York can easily be continued during the session. The student can therefore, while attending lectures in this institution, pursue without interruption a thorough academic and clinical course, which no other college holding its sessions at the same time can afford. Most of the Faculty are already known to fame as medical teachers of superior attainments and long experience. The advantages they offer the student should induce many, as we hope may be the fact, to continue their summer studies, or to commence their medical course in this institution.

— At the last meeting of the N. Y. Academy of Medicine, Dr. James Anderson was elected President, and Dr. Alfred C. Post, Vice President.

— Dr. B. F. Barker presented to the N. Y. Academy of Medicine, at its meeting, Nov. 21, three new deodorizing agents, which he recommended for their cheapness and efficacy. The formulas for their preparation he gave as they had been sent to him by Dr. Skinner, of Liverpool, England, whose suggestion they were.

The first was composed of calcined oyster shells, fifteen ounces; oil of tar, sixty-four grains. When used, it should be intimately mixed with two to four teaspoonsful of the finest dry bran.

The second was made of prepared chalk, fifteen ounces; caustic lime, one ounce; oil of tar, sixty-four grains; which may be sprinkled upon the discharges in the chambers, so as to correct their unpleasant odor.

The other preparation was composed of tr. camphor and tr. myrrh,

each three drachms; soap linament, two drachms; acetic acid, twenty minims; oil of tar, q. s. This liquid preparation can be used as an injection, applied upon dressings to offensive surfaces, as cancer of the womb, &c.

— *Citric Acid in Acute Rheumatism.*—Dr. Hartung, of Aix-la-Chapelle, is very enthusiastic on the employment of citric acid in the treatment of acute rheumatism, since he does not hesitate to place it above all other remedies used for the treatment of this disease. He prescribes 6 grammes (94 grains) in 150 grammes (about 5 ounces) of water, with two or three ounces of syrup, and orders a teaspoonsful of this solution to be taken every hour, night and day.

— *Reduction of Dislocations with the Aid of the Local Application of Chloroform.*—M. Orliac attributes to the employment of chloroform, applied by means of compresses over the muscles concerned in resisting reduction, the great facility he experienced in overcoming the difficulty he had met when using the ordinary means. He reports several cases of success. In two cases, the quantity of chloroform employed was from 10 to 12 grammes.

— The review of Leidy's *Anatomy*, prepared for this number, has been crowded out. It will appear next month.

Books and Pamphlets Received.

Statistical Report of the Sickness and Mortality of the Army of the United States, from Jan. 1855 to Jan. 1860. Prepared by R. H. Coolidge, M.D., Washington: 1860.

On Diseases Peculiar to Women, including Displacements of the Uterus. By Hugh L. Hodge, M.D., &c., Philadelphia: Blanchard & Lea. 1860.

Lives of Eminent American Physicians and Surgeons of the Nineteenth Century. Edited by S. D. Gross, M.D., &c., Philadelphia: Lindsay & Blakiston. 1860.

Clinical Lectures on the Diseases of Women and Children. By Gunning S. Bedford, M.D., &c., New York: S. S. & W. Wood. 1860.

Compendium of Human Histology. By C. Morel. Translated and Edited by W. H. Van Buren, M.D. &c., New York: Baillière Bros. 1861.

A Practical Treatise on the Ætiology, Pathology, and Treatment of the Congenital Malformations of the Rectum and Anus. By William Bordenhamer, M.D., New York: S. S. & W. Wood. 1860.

A Hand-book of Hospital Practice. By Robert D. Lyons, New York: S. S. & W. Wood. 1861.

Theory and Practice of the Movement Cure by the Swedish System of Localized Movements. By Charles Fayette Taylor, M.D., Philadelphia: Lindsay & Blakiston. 1861.

THE AMERICAN MEDICAL MONTHLY AND NEW YORK REVIEW.

FEBRUARY, 1861.

ESSAYS, MONOGRAPHS, AND CASES.

Further Experiments Relating to the Diuretic Action of Colchicum. By WILLIAM A. HAMMOND, M.D., Professor of Anatomy and Physiology in the University of Maryland.

In the Proceedings of the Academy of Natural Sciences, of Philadelphia, for November, 1858, I gave the results of a series of investigations relative to the diuretic properties of digitalis, juniper, squill, and colchicum, by which it was shown that the latter alone possesses the power of increasing the amount of organic matter eliminated by the kidneys. From this circumstance, the argument was adduced, that this substance, of all those experimented with, was the only one that could be regarded as a true depurator of the blood.

The results obtained by earlier investigators cannot be regarded as satisfactory, owing to the faulty manner in which their analyses were made. The urine was concentrated by heat, and thus a large quantity of its organic matter underwent decomposition.

Since the publication of my experiments, Dr. Garrod, of London, has studied the physiological action of colchicum; but, led away by his theory of the nature of gout, he limited his researches mainly to the de-

termination of its influence over the excretion of uric acid, which, as is well known, forms but a small proportion of the total amount of organic matter excreted by the kidneys. As the result of his investigations, he announced that colchicum does not increase the quantity of uric acid contained in the urine, and that it is not by any action on the kidneys that the remedy in question exerts its curative influence in gout. His result, as relates to the uric acid, does not, so far as I know, conflict with mine, as I did not separately determine the quantity of this substance present; but his conclusion, that colchicum is not a diuretic in the true sense of the term, is certainly not borne out by his own experiments, and is directly at variance with those which I performed.

It was, therefore, obviously necessary that additional investigations should be instituted, and I accordingly undertook the task of furnishing further contributions to the subject. Before proceeding to detail these, I desire to call attention to the valuable memoir of Prof. Austin Flint, in the number of this journal for November, 1860, entitled "*Clinical Researches on the Action of Diuretic Remedies.*" In this essay, in addition to much other valuable matter, the conclusion at which I had arrived relative to the action of colchicum is confirmed; Prof. Flint finding it to produce a marked increase in the amount of solid matter eliminated by the kidneys, without, however, increasing the quantity of water of the urine.

The investigations to which the present paper relates consisted of experiments upon adult males, in a good condition of health. In all cases, the officinal tincture of the seeds of the *colchicum autumnale* was given.

The determinations made were the following: 1st, the quantity of urine; 2d, its specific gravity; 3d, the total amount of solid matter; 4th, the quantity of inorganic matter; 5th, the quantity of organic matter; 6th, the amount of uric acid.

The quantity of urine was determined in cubic centimetres.

The specific gravity was ascertained by means of the specific gravity bottle and a delicate balance.

The total amount of solid matter is given in grammes, and was determined in the following manner: Ten cubic centimetres of the urine were evaporated to as complete dryness as possible *in vacuo* over sulphuric acid, and the residue accurately weighed. By simple proportion, the amount of solids in the whole quantity of urine was easily ascertained.

Although it is impossible to get rid of all the water by this process,

the quantity remaining is extremely small, and the results obtained are far more accurate than those obtained by evaporating to dryness in the water-bath, as generally practiced. No matter how carefully this latter process is conducted, the loss of urea by decomposition is always an important item, and involves far more serious errors than the imperfect desiccation by the former process.

For the determination of the amount of organic and inorganic matter separately, the solid residue obtained as above was mixed with ten or fifteen drops of moderately strong nitric acid, and gently heated till the mass was well dried. The heat was then gradually raised till all the carbon was consumed, and the mass, in consequence, became white. It was then cooled *in vacuo* over sulphuric acid, and weighed. The inorganic matter was thus determined, and the loss showed the proportion of organic substance.

The quantity of uric acid was determined by adding chlorhydric acid to a known volume of urine.

The first experiments were instituted upon myself. In three days immediately preceding their commencement, the average quantity of urine for each day was 1425 cubic centimetres, of specific gravity 1021.73. The average amount of solid matter was 64.28 grammes; of which 30.18 were inorganic, and 34.10 organic substance. The average amount of uric acid excreted for each period of twenty-four hours was 0.77 gramme.

During the experiments with the colchicum my manner of living was not materially altered from that of the three days above referred to; *i. e.*, I ate the same food and took the same amount of exercise, and endeavored to make all the collateral circumstances the same, so as to ascertain as nearly as possible the exact effect produced by the colchicum.

First Day.—On this day I took one fluid drachm of the tincture three times; at 8 A. M., 2 P. M., and 10 P. M. The total quantity of urine excreted was 1685 cubic centimetres, of which the specific gravity was 1021.50. The total amount of solids was 70.15 grammes, of which 30.90 were represented by inorganic, and 39.25 by organic matter. The quantity of uric acid was 0.81 gramme.

Second Day.—One and a half fluid drachms of the tincture were taken, as on the previous day. Quantity of urine, 1720 cubic centimetres; specific gravity, 1020.87; total solids, 75.29 grammes; inorganic solids, 32.44 grammes; organic solids, 42.85 grammes; uric acid, 0.69 gramme.

Third Day.—Same quantity of colchicum taken as on previous day.

Quantity of urine, 1784 cubic centimetres; specific gravity, 1022.57; total solids, 80.13 grammes; inorganic solids, 35.11 grammes; organic solids, 45.03 grammes; uric acid, 0.82 gramme.

Fourth Day.—On this day the quantity of colchicum was reduced to half a fluid drachm, taken as before. Quantity of urine; 1540 cubic centimetres; specific gravity, 1023.17; total solids, 69.23 grammes; inorganic solids, 31.09; organic solids, 38.14 grammes; uric acid, 0.78 gramme.

Fifth Day.—On this day the quantity of colchicum was increased to one and a half fluid drachms of the tincture before mentioned. Quantity of urine, 1698 cubic centimetres; specific gravity, 1023.68; total solids, 76.14 grammes; inorganic solids, 33.26 grammes; organic solids, 42.88 grammes; uric acid, 0.76 gramme. On this day there was some derangement of the general health, manifested by increased heat of skin, fever, and severe abdominal pains. There was also a little diarrhœa. The experiments were, therefore, discontinued.

From an examination of the results obtained by the foregoing investigations, the effect of the colchicum upon the urinary excretion cannot fail to be perceived. The conclusions which I think may be formed are: 1st, That the colchicum increases the quantity of urine. 2d, That it increases the total amount of solid matter eliminated. 3d, That this increase is mainly due to an augmentation of the organic matter. 4th, That the amount of uric acid does not appear to be affected.

These conclusions are rendered much more probable from the fact that on the fourth day, when the quantity of the tincture of colchicum taken was reduced one-third, the effect upon the urine was less decidedly marked; and that when, on the fifth day, it was again augmented to a drachm and a half, the urinary excretion was materially increased in quantity, and the solids, the organic especially, remarkably raised in amount. The relation of cause and effect would therefore appear to exist; and accordingly, it would be contrary to the principles of sound reasoning to assert that the change in the composition of the urine was accidental. It is doubtless true that the urine changes greatly from day to day, and even from hour to hour; but this fact is due to the other fact, that we are constantly varying our food, exercise, &c. When, however, as in the investigations cited in this paper, these circumstances are fixed, and only one difference exists between the ordinary mode of living and that practiced during the continuance of the experiments, we are fairly justified in attributing any

change in the urine or in any other excretion to the influence produced by that difference.

In the next series of experiments the effect is just as directly shown, though, for reasons beyond my control, they were not continued as long as was desirable.

The subject of these experiments was a young man 23 years of age, and weighing about 140 pounds. Before taking the colchicum, I examined his urine whilst he was taking a fixed quantity of food and exercise, he being at the time an attendant in the hospital under my charge. As the results of these examinations for three consecutive days, I obtained the following as the averages for each day: Quantity of urine, 989 cubic centimetres; specific gravity, 1020.14; total solids, 51.20 grammes; inorganic solids, 22.45; organic solids, 28.75; uric acid, 0.47 gramme.

First Day.—On this day one drachm of the tincture of colchicum was taken three times. The effect upon the urine was as follows: Quantity, 1021 cubic centimetres; specific gravity, 1024.18; total solids, 63.25 grammes; inorganic solids, 23.57 grammes; organic solids, 40.68 grammes; uric acid, 0.59 gramme.

Second Day.—One and a half drachms of the tincture were taken to-day three times, as previously. Quantity of urine, 875 cubic centimetres; specific gravity, 1026.11; total solids, 60.25 grammes; inorganic solids, 20.38 grammes; organic solids, 39.87 grammes; uric acid, 0.51 gramme.

On this day diarrhœa was produced. This was of quite a severe character, and, in consequence, the colchicum was not further continued.

The remarkable effect of the colchicum in increasing the amount of organic matter excreted is, however, very decidedly shown. This increase is so great as to render the probability of its being accidental extremely small, and we cannot do otherwise than regard it as being directly due to the influence of the colchicum.

The details of the third case in which the colchicum was given have been unfortunately mislaid. I am, however, enabled to state with certainty, that the same well-marked effect over the amount of organic matter excreted by the kidneys was exerted as in the cases the particulars of which have been given in full. The experiments were continued for six days, with variable quantities of the tincture.

What are we to infer from these investigations? It appears to me that the conclusion must be admitted that colchicum is a true dep-

urator of the blood, and hence we have an explanation of its good effects in those blood diseases, gout and rheumatism.

It is seen that no constant effect was produced upon the quantity of uric acid eliminated, and hence these experiments do not conflict with those of Dr. Garrod. We are not, however, bound to admit that the presence of uric acid in the blood in increased amount during a paroxysm of gout or rheumatism, is the cause of that paroxysm; and consequently, because colchicum does not increase the quantity of this substance found in the urine, we are not to suppose that the remedy in question does not exert its influence through the kidneys.

Report of Cases of Phthisis, Scrofula, and other Diseases treated by the Chlorate of Potash, with Remarks on its Mode of Administration and the Importance of using a Preparation free from Impurity. By E. J. FOUNTAIN, A.M., M.D., of Davenport, Iowa.

Believing that all the unpleasant effects which some have observed as resulting from the administration of the chlorate of potash, and much of the loss of confidence recently expressed in its virtue as a remedial agent, to be due chiefly to the common use of preparations which are not perfectly pure, and, in some degree, to an injudicious method of administration, I feel it to be a duty incumbent upon me to offer some evidence in support of this belief, and in connection therewith, to illustrate the utility of the preparation by a report of some cases of recent date. I do this with reluctance, from the fact that I have already placed before the profession my views of some of the properties of this salt; and am well satisfied that its value will ultimately be determined by far more able observers, and to them and the profession at large I would willingly leave the further investigation of the subject. But, having presumed to suggest its use in what I supposed to be a new and untried field, and on theoretical grounds which have been considered untenable by excellent authority, (Dr. Squibb,) I cannot hesitate in again contributing something which I hope may aid at least in securing for it a fair trial. And this I will do, not in the spirit of hobbyism, to sustain opinions previously promulgated, but simply as an expression of facts which have some value, although too limited—as the experience of but one person—to be in all respects conclusive in character.

By a report from the Buffalo General Hospital, published in a recent number (December) of the AMERICAN MEDICAL MONTHLY, it ap-

pears that in three cases where it was administered, "the appetite was diminished, the diarrhœa and anæmia exacerbated, and nausea produced or increased." Without any special reference to its value as a remedy in phthisis, I desire to submit evidence of our ability to use it freely and under all circumstances where it is indicated, without producing any such effects upon the digestive organs; and not only with no such unpleasant effects, but with decided improvement to the appetite, an increase of strength, and recovery from anæmia, where previously existing.

I will preface the history of some cases by saying, that since I have been using the French chlorate of potash of absolute purity, I have not known of a single instance where it has produced either diarrhœa or loss of appetite. The difference in effects between this and the kind ordinarily kept by druggists will be apparent from some of the cases I am about to relate. These will be given mostly in outline for brevity, omitting much of detail which would be essential in a more formal report.

Since the publication of the paper which I had the honor of reading before the American Medical Association, I have not had an opportunity of testing the treatment for incipient phthisis in any case of well-marked character; but a few cases of the disease in advanced stages will be related, for the purpose of showing some of the physiological and therapeutic effects of the remedy, and the extent to which it can be administered with safety and benefit.

Case 1.—Wife of the Rev. Mr. J., aged 30, of delicate form and a remarkably mild and amiable disposition; predisposed to consumption from her parents; mother of four children, who manifest in general appearance a strumous diathesis.

Began coughing in November, 1858, after an attack of bilious fever. Had hæmorrhage from the lungs three times in June of 1859, and slight symptoms of the same quite frequently since.

January 2d, 1860.—All the symptoms of advanced phthisis, well marked: cough, purulent expectoration, emaciation, hectic, night-sweats, &c. Physical signs plainly indicative of tubercles in both lungs, with cavities in the left. Cod-liver oil, quinia, anodyne expectorants, &c., were prescribed. The oil could not be tolerated by the stomach, and in a few days so great was the dyspnœa, that I substituted the chlorate of potash in drachm doses, three times daily. This produced no disturbance of the stomach, but an increase of appetite, diminution of expectoration, relief of the oppression and dyspnœa, and general improvement in all respects. After a short time all other

tonics were discontinued, the patient expressing a confidence in the belief that this alone was productive of any benefit. On two occasions the chlorate was omitted for a few days, from neglect or inability to renew the supply; and on each she rapidly failed in strength, and dyspnœa increased, with an aggravation of all unpleasant symptoms, which soon subsided again on resuming the use of the chlorate as before. With these interruptions, it was taken three drachms daily, for a little more than two months; at no time producing either diarrhœa, nausea, or a sense of loathing. On the contrary, she regarded it as her only hold on life—taking it always without dislike, and frequently saying she knew she could not live without it. Other remedies of a palliative character were given as occasion required. Early in March she felt so much improved that she ventured on taking a walk, and imprudently took a very long one, requiring the ascent of a hill on returning. This greatly overtasked her strength, and from the extreme prostration which followed she never entirely recovered. A few weeks later I found her suddenly failing, with greatly increased dyspnœa. She directed my attention to the chlorate, saying the last package which she had obtained appeared quite different from any which she had previously taken; having a *nauseous* taste, offended the stomach, and appeared to do her no good. After several attempts she was compelled to abandon it. I recognized at once an impure article, and returning it to the druggist, I was informed that his own supply had failed, and this he had obtained from another, knowing it to be inferior in quality, but the only kind he could find in the city. As he was in daily expectation of receiving a supply of the pure chlorate, I concluded I would try to do the best I could with my patient without any until it might arrive. In this expectation we were disappointed, and in the mean time it soon became apparent that life could be prolonged but a short time, and no further effort was made but to palliate her suffering and smooth her pathway to the grave. She gradually sank, and died on the tenth day from the discontinuance of the chlorate.

The following was my method of prescribing it: *R.*—Potass. chlorat. pulv., ʒvj . Ft. chart., no. xvi. One powder to be taken each day, in three doses—each extemporaneously dissolved in a small quantity of hot water, sufficient to effect a solution; the first dose in the morning not to be taken on an empty stomach, but after breakfast. In this manner it was taken for more than two months, promoting sleep, improving the appetite, relieving the dyspnœa and pectoral distress, reducing the expectoration, and sustaining the strength of the patient.

Case 2.—Wm. P., aged 22, of consumptive predisposition by birth. In May, 1860, after being much reduced by chills and fever, he was suddenly attacked with profuse pulmonary hæmorrhage, and from that time had been gradually failing, with symptoms of consumption. Came from Ohio to be placed under my care early in October. The following are my notes of his condition when first examined, October 12th: "General appearance indicative of emaciation and impoverished sanguineous system. Respiration hurried, and attended with dyspnoea on the slightest exertion. Cough frequent, with considerable expectoration. *No appetite*, frequent night-sweats. Debility so great that he requires assistance to go up stairs. Body greatly emaciated; ribs much depressed under the clavicles; marked dullness on percussion over all the left lung, anteriorly and posteriorly; slight degree of dullness over superior portion of the right. No respiratory murmur audible beneath the clavicle on the left side, but loud bronchial respiration and broncophony, with a click attending each respiration. Lower down, slight indications of moist crepitation. Râles loud and abundant posteriorly, near the angle of the scapula. Dullness very marked in this region. On the right side, under the clavicle, the breathing coarse and insufficient, with prolonged expiratory murmur."

Treatment.—A wine-glassful (3ij.) of the saturated solution of the chlorate of potash, (one drachm of the salt,) three times a day, after meals, and as much exercise in the open air as strength will permit. Rapid improvement soon followed this treatment. In a few weeks his strength improved so that he could take quite a long walk each day, ascend stairs without assistance, and eat heartily with a *good appetite*. Cough and expectoration very much diminished. Patient feels like another person, and is in all respects very much improved. The chlorate is taken three, and sometimes four times a day, without reluctance or any inconvenience. Lungs re-examined November 4th. *Right side*—no dullness on percussion; respiratory murmur clear and well evolved. *Left side*—dullness the same as when first examined; the same bronchial sounds, with the click; but an absence of râles where they were before abundant.

A few days after this he was influenced, contrary to my wishes, to visit some relatives in St. Paul, with the intention of remaining through the winter in that country. As I apprehended, he contracted a cold on the boat, which he further aggravated by undue amount of exercise and great imprudence immediately after his arrival. As I have been informed by his physician in St. Paul, symptoms of great prostration ensued, under which he rapidly sank, and died with-

in a few days after his arrival. The points of interest in this case are, the rapid improvement following the use of the chlorate, with a corresponding change in his physical symptoms revealed by auscultation; a perfect tolerance of the remedy, which never produced nausea or diarrhœa, but greatly increased his appetite and power of digestion.

Case 3.—Miss Anna H., aged 17—had whooping-cough last fall, followed in the winter by a cough, which her family believed to be indicative of consumption. During this time she was attended by a homœopath, who was discharged on account of his inability to relieve her of a more recent and severe attack of illness. I was called to see her June 22d, when she was supposed to be in a hopeless condition. I found her laboring under a frequent and suppressed cough, with rapid and labored respiration, and frequent, but feeble, pulse—the latter 128, and the former 61 per minute. This great discrepancy between the pulse and respiration, by excess of the latter in frequency, indicated some serious impediment to the due performance of the function of respiration. Auscultation confirmed this opinion. Subcrepitant and mucous râles over all parts of the right lung, and a large portion of the left. Slight but not well-marked dullness over a part of the right. No expectoration. Diagnosis: capillary bronchitis, involving a general pulmonary congestion and imperfect aeration of the blood.

Treatment.—An ounce of the saturated solution of the chlorate of potash, every three hours. On the morning following, I found her much relieved. Respiration 44, pulse 96; increasing in the afternoon to 48 and 110. Ordered quinia, 10 grains for the next day, and five grains for each of the three days following. Chlorate continued the same. June 26th, respiration 24, pulse 82; very few râles to be heard. Steady improvement followed. The chlorate was continued, in gradually diminished doses, for several weeks; during which time she recovered from her illness, excepting the symptoms of an organic disease, disconnected from the pulmonary organs.

Case 4.—Mrs. B., aged 44, has for many years been in delicate health, but with no well-defined indication of organic disease. Is subject to some cough, and has several times had slight hæmoptysis. Has frequently taken cod-liver oil with benefit. In the spring of the present year, her debility was greater than usual; appetite very poor; nights passed restlessly, with but little sleep; sense of oppression and distress in the chest; cod-liver oil and ordinary tonics given, with no benefit, or but very little; substituted solution of the chlorate of potash, table-spoonful three times a day. This has been taken during all

the past summer and fall, and is still being used, though not with such regularity at the present time, (Dec.) The lady often tells me that she cannot do without it. Her appetite and general strength have been greatly increased, and in every way she is much relieved and benefited by it. Whenever she omits taking the solution for a number of days, she tells me that she always feels the want of it, and experiences immediate improvement upon resuming its use.

Case 5.—Rev. Mr. C., aged 26, applied to me in September for the relief of a chronic eruption of an eczematous character, for which I prescribed a wine-glassful of the saturated solution of the chlorate, morning and evening. A few weeks after this, he surprised me by saying that he felt himself being greatly relieved of a pulmonary difficulty, which had been gradually increasing upon him for several years; but he had said nothing about it when he applied to me, as he believed that no medicine could help him. This difficulty was a weakness of his lungs, attended with a slight cough; gradually increasing dyspnoea; difficulty and pain in expanding the chest; loss of strength in the voice; tenderness of the chest when pressed; no appetite; uneasy, restless nights, and general debility. Though attending to his duties as assistant pastor of a Catholic church, he felt unequal to their proper performance, and feared they would soon have to be abandoned. All this I knew nothing about when I gave him the chlorate, nor did he suspect that it would have any influence over these symptoms; yet, on using it, he was soon surprised to find himself being greatly relieved of them all, and he came to inform me of the change in his condition: dyspnoea relieved; cough almost gone; *appetite good*; color and appearance much improved. He is still taking it the same way, having now been using it for three months, and he looks and feels almost like another person. He has grown much stouter, has a healthy complexion, a strong voice, and excellent appetite. On several occasions he has omitted the chlorate for a time, and always found his old symptoms returning; and thus by his own intelligent observation, without any prompting from me, or any previous knowledge of the properties of the chlorate, he has been fully convinced of its efficacy in relieving him of his pulmonary difficulty and its value as a general tonic.

Although no examination of the lungs was made in this case, owing to the fact that no difficulty there was suspected, yet, from its peculiarity, it is of special interest and importance as a demonstration of the power of the chlorate over the organs of respiration, and its efficacy as a tonic. Of this there can be no mistake, as the result was quite as unexpected as the difficulties relieved were unknown to

me, and there was, therefore, no possible chance for any self-deception, by reason of my partiality for the chlorate in such cases.

Case 6.—Miss Josephine C., age 12, has had a fœtid discharge from one ear all the time, and frequently from both, since she was an infant eleven months old. During this period, she has had all manner of treatment from different medical attendants. Iron, iodine, cod-liver oil, iod. of potassium, &c., had been prescribed at different periods, and a great variety of local applications, all without any material benefit. The family have been living in good circumstances, and have made every possible effort for the relief of the patient. The hearing in one ear was much impaired, the discharge constant and very offensive. General state of health not good; anæmic, appetite poor, subject to headache almost constantly.

June 20th, 1860.—Upon being consulted by the mother, I concluded to give trial to the chlorate of potash, on the supposition that the disease was of a strumous character. I directed three table-spoonsful of the saturated solution to be taken morning and evening, with no other remedy and no local treatment, except occasionally cleansing the ear with warm water. In less than two weeks the mother called upon me to express her gratitude for the surprising change which the treatment had produced. The discharge had ceased entirely for the first time in eleven years, and she was looking and feeling in all respects much better. Condition four weeks later: No return of the discharge from the ear, and healthy wax is appearing for the first time since she was a child. Hearing improved. Headache has left her almost altogether; (before taking the chlorate, it was the exception to the rule to be free from it;) appetite excellent; general health quite restored—better than she had ever enjoyed before—and she is surprising her parents and friends by the rapidity with which she is gaining flesh. In place of her former anæmic, waxy appearance, she is now fair and ruddy. In the six weeks that she has been taking the chlorate, (which had produced no inconvenience,) she has been perfectly cured of an extremely unpleasant difficulty which had existed from infancy, and changed from a delicate, unhealthy-appearing girl, to a perfect picture of health and beauty.

Case 7.—Child of Mr. D., age 5, for a year or more had been troubled with an eruption all over the body; appeared first in small red points, soon progressing into a pustular eruption, and degenerating into dry scabs, which coalesce into patches of various size and irregular form, occasioning but little pain, but great annoyance from itching. Ordered chl. pot., a table-spoonful of saturated solution four times a

day. In a few weeks the disease entirely disappeared. Previously she had suffered much with headaches and had a very offensive breath, from both of which she has been quite relieved while taking the chlorate.

Case 8.—Mr. Wm. M., a gentleman of good constitution and usually of good health. Applied for the relief of a painful, indolent-looking tumefaction on the leg, over the front of the tibia, in appearance threatening to form an open ulcer. Skin surrounding it for several inches of a dark, livid color. Cause unknown, but from appearance believing it to be from some derangement of the blood, I prescribed the chlorate of pot., a wine-glassful of the sat. sol., morning and evening. The livid color soon began to disappear, and a gradual but steady restoration to a healthy condition followed. After he had been taking it a number of days, he remarked to me that the medicine had given him a *great appetite*, which previously was not good; a fact that I did not know until he voluntarily informed me of its marked improvement.

Case 9.—Mr. W., aged 35, I found very much reduced from profuse suppuration, proceeding from numerous and extensive ulcers and sinuses of a scrofulous character on the neck, originating in the chain of lymphatic glands. Had been under treatment for some months, the suppuration being constantly encouraged by poulticing. The sinuses were freely opened immediately, caustic and stimulant applications applied, and tonic treatment, including iron, quinia, iodine and cod-liver oil, prescribed in liberal quantity. Constitutional symptoms improved, and amount of suppuration much reduced, but a number of weeks I tried in vain to promote healthy granulation and cicatrization, until I gave him drachm doses of the chlorate, three times a day. This soon changed the livid color to a healthy arterial hue, and from this time permanent improvement began and progressed, though slowly, until quite restored. For about two months he took three drachms of the chlorate daily, without diarrhœa or nausea. He took it in the form of a wine-glassful of the sat. sol. after each meal. It never produced nausea or diarrhœa, and he frequently said to me that it gave him a good appetite.

Case 10.—Daughter of Mr. S., age 2 years and 10 months, has been losing flesh and color for some weeks, with no well-defined symptoms of any disease that could be recognized. Iron and quinia failed to relieve the anæmia. Parents became much alarmed. Abscesses began to form on the fingers and elsewhere; slight scratches degenerated into ugly sores; the breath quite fœtid; no appetite; body much emaciated. Ordered a dessert-spoonful of the saturated solution four

times a day. Soon the little patient began to show signs of improvement, which steadily progressed to complete recovery in a few weeks.

Case 11.—A little girl aged 4 years was brought to my office from the country, July 28th. For the past two years has had a constant and very foetid discharge from the nares, acrid in character, excoriating the lip. Sometimes lumps of hard, dark-looking matter discharged. Health poor generally. Prescribed a table-spoonful of the saturated sol. of the chlorate, with a little comp. tinct. of bark, three times a day. August 11th, patient again brought to me by the mother. Change in condition very striking. Discharge almost entirely checked, and no offensive odor. The mother remarked, "She is like another child; has a better appetite, and is much brighter." Ordered a continuation of the treatment, and have not seen her since.

Case 12.—Mrs. L., suffering with a large carbuncle on the back, and smaller ones appearing elsewhere on the body. Prescribed chlorate of potash, half an ounce daily. In a few days she informed me that it produced diarrhœa and nausea, and tasted repulsive. I examined the preparation, and at once recognized the common, impure chlorate. I immediately ordered some to be obtained from one of our best druggists, where they keep none but the French chlorate. This, she soon informed me, tasted different; was not nauseous, and produced no diarrhœa. The patient is now recovering on its use. The large carbuncle, after being opened, is discharging freely and looking well, and the smaller ones apparently subsiding. In this case, like the first, it will be observed that a marked difference was noticed by the patient in the effects of different samples of the chlorate.

Case 13.—*Morbus Coxarius.*—Eliza Bennett, aged 6. For two years previous to my attendance, has suffered with all the characteristic symptoms of tuberculosis of the hip-joint, which has been seen and treated at different times by a number of physicians. I was called to the case in June of the present year, (1860.) Found the child emaciated, attempting to hobble about on a crutch; in appearance and expression the picture of distress and long suffering. Inversion and apparent shortening of the limb; tissue about the joint hardened and prominent, through which there were five openings from the joint, discharging, more or less, at the time of my visit. There was also an opening over the lower point of the sacrum, from which two or three small pieces of bone had been discharged.

I could hope to do but little for the case, as the family lived in the country, in a miserable shanty, with no ability to take proper care of the child. As I had commenced testing the chlorate of potash in all

forms of scrofulous affections, I prescribed it in this case on general principles, and as a matter of experiment. I ordered a table-spoonful of the saturated solution, to be given three times a day.

I did not see or hear of the case again until two months after, when I was sent for to see the father, who was sick with fever. After talking with him for a few moments, the mother asked me to look at my little patient with the hip disease. To my astonishment, I found the child, at that moment, bringing in an armful of wood—a bright, healthy-looking little girl, walking erect, without any apparent lameness. I could hardly believe it was the same child until I examined the hip and found all the marks of the old openings now perfectly closed. She had taken the chlorate regularly, improving constantly and rapidly under its use. The discharge from the openings gradually ceased, the appetite and strength improved, and the stiffness of the joint relaxed, until within two months it could be used almost as freely as the other. Careful measurement showed there was no real shortening of the limb. By watching carefully, a very slight lameness can be detected in walking. In October I exhibited the child before the Scott County Medical Society, some of the members of which had seen my patient before I commenced my treatment, and knew from their own observation the full extent to which the disease had progressed. By this time she was as healthy looking as any little girl that could be found—plump and rosy-cheeked, with a cheerful, happy expression.

At this meeting all the members examined the case, and are witnesses to a complete recovery of a bad case of morbus coxarius under the influence of the chlorate of potash.

I might add other cases to the above list, in testimony of the value of the chlorate of potash, in various affections, but these are sufficient for my present purpose. I will simply add, that in the practice of my friend Dr. J. M. Adler, of this city, the use of the chlorate of potash is attended with equally favorable results. He informs me that in two cases of incipient phthisis, the treatment has been successful in arresting the disease and restoring the patient to sound health. But these and other cases, which I may obtain elsewhere, will be reserved for some future occasion. Such as I have here reported will, I trust, be sufficient at least to encourage others to give the remedy a fair trial. In this connection, and for the purpose just expressed, I will copy the following, from a communication to the *American Medical Times*, of December 15th, 1860, from T. C. Moffatt, M.D., of the Seamen's Retreat, Staten Island.

“My experiments in the use of the chlorate of potash in phthisis, as employed by Dr. Fountain, of Iowa, have not yet been of sufficient duration to warrant me in speaking of it with very great confidence; but I am encouraged to persevere in the use of it more and more daily. One patient in the advanced stages of the disease in question has been using it in one-half ounce doses, daily, for eight days. Before commencing this treatment his breathing was difficult and hurried upon the slightest exertion; his lips were livid, and extremities cold. He was able to get but little sleep, owing to an almost constant cough; and his appetite, never good, was sometimes so poor that he could take no nourishment at all for an entire day. His general appearance now strongly confirms the testimony which he gives, that he sleeps nearly all night undisturbed. The pain and constriction of the chest are much relieved; and expectoration, formerly quite profuse, has ceased almost entirely. His condition in every respect is materially improved. Two other patients, also in advanced phthisis, have been using the article but three or four days. One of them speaks confidently of decided improvement, and says that he breathes freer, and sleeps and eats better. None of them complain, as yet, of any inconvenience whatever from the use of it. I hope to be able to test the efficacy of this article in the incipient stages of the terrible scourge in question, which swells our mortality list to nearly one-half, and everywhere is proverbially destructive among the men of the sea.”

Inasmuch as the chlorate of potash must be given in large doses, and in all chronic cases continued for a long time, in order to derive full benefit from its use, it is of the utmost importance that the article should be perfectly pure. I wish to impress this upon the minds of all who use it, that it may not be unjustly condemned for what may often be the effects of impurity in the preparation. I do not wish to be understood as saying that none but the French chlorate is perfectly pure, but only that I am acquainted with no other that I can depend upon, and that such as druggists usually keep is inferior to it. Physicians must look to the quality of the article with which their patients are furnished, or they are likely to be deceived, and unjustly to condemn it. For the benefit of the readers of this journal who live at a distance, and in reply to inquiries which have been made of me by letters, I will here say, that none better can be obtained or desired than the French chlorate of potash which is furnished by the house of Lazell, Marsh & Gardiner, No. 10 Gold Street, New York. It is in small scales and flakes, of brilliant appearance and pearly whiteness; while the ordinary variety is in larger crystals and lumps, and

not so bright in lustre. When pulverized, the difference in appearance is still apparent, the latter being duller and darker; and it is also more difficult to reduce to a fine powder. In its administration, I do not now give it as I did in the cases reported in my paper on phthisis, dissolved in an unnecessarily large quantity of water, but generally make a saturated solution with hot water. As it cools some will, of course, be precipitated, but the water is thus, and thus only, sure to be saturated. In cold weather I direct this to be kept in a warm room, that the temperature of the liquid may not fall too low, and thereby precipitate more of the chlorate. At summer heat it will retain about an ounce to a pint, making fifteen grains to a table-spoonful, and one drachm to a wine-glassful, (2 oz.,) my ordinary dose for an adult. This I give from one to four times a day, as circumstances require, and usually after meals. I have one patient who prefers taking the dry powder in his mouth and washing it down with a drink of water, and I am not sure but I would prefer taking it this way myself.

Believing the chlorate of potash to be a *tonic*, *alterative* and *blood depurant* superior, in many respects, to anything in our materia medica, I do not hesitate again to urge its claims upon the attention of the profession. From the time when, in 1851, I discovered its utility as a remedy for mercurial ptyalism, I have been testing its properties in many directions, and with constantly increasing confidence in its virtues, and (in the language of Dr. Hutchinson) "its scarcely less than wonderful power." I believe there is no tonic and alterative comparable to it in all manner of scrofulous diseases, and every form of tuberculosis, in the sequelæ of the exanthemata, in adynamic fevers, and asthenic types of disease with depressed vital power, in every condition involving an imperfect aeration of the blood, and many derangements of the system resulting in abscesses, eruptions, ulcers, &c. In my opinion, it has this wide range in its application by reason of its *oxydizing* properties, in support of which I may have something to say hereafter.

A Paper on Diphtheria, with an Attempt to Portray its History in the United States. By JAMES WYNNE, M.D.

(Read before the N. Y. Academy of Medicine, January, 1861.)

Diphtheritis; Diphtheria, from *Διφθερα*, a half-tanned hide; Pellicular inflammation. Synonyms: Angina maligna, Angina gangrenosa, Angina pellicularis, Angina pestilential, Angina suffocante, Pharyngite couenneuse, Fr. Garrotillo, Spanish. Male de canna, Italian.

Diphtheria is a disease in which the dermoid tissue, as the mucous membranes especially of the throat and the skin, manifests a disposition to the formation of a false membrane. It usually appears in the form of an epidemic or endemic, but sometimes occurs in sporadic cases.

HISTORY.—The earliest medical records contain accounts of a disease that prevailed in Egypt, Syria, and other parts of the East, under the names of *Ulcus Ægyptiacum* and *Ulcus Syriacum*, in which many of the characteristics of diphtheria are clearly set forth. The most accurate account of the *Malum Ægyptiacum*, however, is that given by Aretæus, one of the ablest of the Greek physicians, who lived about the time of Galen, if not contemporary with him. His description clearly identifies the disease with the one which has unfortunately come to occupy so large a share of the attention of medical men, especially in France, during the present century.

Aretæus, in speaking of this affection, thus notices some of its peculiarities: "*Ulceræ in tonsillis fiunt, aliqua mitia, aliqua pestifera, necantia. Pestifera autem sunt lata, cava, quodum concreto humore albo, livido, aut nigro sordentia. Quod si concreta illa sordes altius descenderit; affectus, ille eschara est, atque ita Græce vocatur Latine crusta. Crustum vero circumvenient rubor excellens et inflammatio, &c.*"*

Cælius Aurelianus, who lived in Africa, speaks of an epidemic of *Malum Syriacum* that prevailed extensively in that country in his time.† Macrobus describes a similar visitation at Rome, A.D. 380. It prevailed as an epidemic in Holland in 1337; at Paris in 1576; and at Naples in 1618–19, where it numbered five thousand victims; accurate descriptions of which were given by Nola, Zactus Lusitanus, Marcus-Aurelius Severin, and J. B. Carnevele.‡ At this period

* Aretæus, De Causis et Signis auctorum et diuturnorum morborum. Lib. iv., Cap. 9.

† Cælius Aurelius. Acutarum et chronicarum passionum libri quinque. Lib. iii., Cap. 2.

‡ J. B. Carnevele. De morbo strangulatorio affectu. Naples: 1620.

Diphtheria was frequent in many parts of Spain, where it continued to prevail as an epidemic for forty years.* In 1636 it manifested itself at Kingston, on the Island of Jamaica; in 1736 it visited Boston; in 1743 it returned to Paris, where it continued until 1748, accounts of which have been given by Malouin† and Chomel.‡ It appeared at Cremona in 1749,§ and the same year in England, where its characteristics were noted by Fothergill and Starr.|| In 1770 it manifested itself at New York, and gave rise to a valuable monograph on the subject by Dr. Samuel Bard.

It was not, however, until its appearance at Tours in 1818, that it assumed the name of Diphtherite, by which it is generally recognized in England and the United States, at the hands of M. Bretonneau, whose investigations have largely contributed to the present fund of knowledge on this subject, and to whom the first connected and practical researches are due. Diphtherite made its first appearance at Tours in 1818, in the barracks of the soldiers, in the rear of the legion of La Vendée, and from thence spread to the surrounding quarters. The attack among the soldiers was usually a gingival diphtheria, but as it spread into the city the larynx became the seat of the disease, and the gums were not largely affected. From Tours the disease slowly spread to La Ferrière, which it reached in 1824, where, out of two hundred and fifty inhabitants, twenty-one were attacked and eight died. In 1825 the communes north of Orleans were attacked; and in 1828 those south of Orleans suffered from this disease.

In 1821, M. Bretonneau presented a memoir to the Academy of Medicine, at Paris, on diphtheria, as it had prevailed at Tours, which was followed by several others in subsequent years. The whole of his laborious and exact researches were finally given to the world in his treatise entitled, "*Des inflammations speciales du tissu muqueux et en particulier de la diphtherite, ou inflammation pelliculaire.*" From the period of its outbreak at Tours, diphtheria appears to have seldom or never been absent from one or the other of the departments of France, pursuing a very erratic course, both as to its mode of visitation and the intensity of its attacks, so that the annual reports of the French

* A. Tamayo. De morbo garrotillo. Madrid: 1622.

† Temoignages Historique, p. 66.

‡ Chomel. Dissertation historique sur l'aspect du mal de gorge gangreneux qui a régné parmi les enfans l'année dernier. Paris: 1749.

§ Ghisi. Lettre Medeche. Cremona: 1749.

|| Philosophical Transactions of the Royal Society. London: 1749.

Academy of Medicine on prevailing epidemics seldom fail to note its existence in some portions of the Empire. The visitations, however, which have produced the greatest alarm, not only on account of their severity, but also because of the respectability of the victims, were those of Paris and Boulogne in 1855. The disease at Paris attacked both rich and poor, and while it carried off a large number of children, proved fatal to many adults, more especially those who were often in attendance upon the sick. Among these was the eminent medical writer, Valleix. That, however, at Boulogne was not only the gravest, but of the longest duration, continuing from January, 1855, to March, 1857. During this period it caused 366 deaths, of which 341 were of children under ten years of age. In this epidemic, as in that of Paris, no condition was spared; and, indeed, the attack seemed to fall with the greatest severity upon the children of the wealthy English residents, who, from their more favorable hygienic position, might be supposed to enjoy a comparative immunity from epidemic disease.*

Nor does its fatality appear to have been diminished in subsequent years, for in the report for 1858, read by Trousseau, 22d November, 1859, it is stated that diphtheria prevailed in 31 departments, and attacked 1,568 adults and 7,474 children; of these, 165 adults and 3,384 children died.

In England, the disease first presented itself in the south-eastern counties nearly opposite Boulogne, in the early part of 1857;† and traveling from station to station, visited especially the ill-drained and marshy districts, and the neglected and unhealthy localities in towns. Some of the first cases occurred in the practice of Mr. Rigden, of Canterbury, at the beginning of the year. He describes "seven cases of diphtheritic inflammation of the fauces and tonsils, attended with considerable fever, depression and swelling of the tonsils, the fauces and part of the mouth being covered with a pasty lymph." From this point it gradually diffused itself through the eastern counties, fastening especially upon the marshy districts, in which the attacks were numerous, although the mortality was not in proportion to the number of cases. During the winter months of 1857, it had largely diffused itself through the county of Essex, causing eight out of twenty deaths, and enhancing the rate of mortality in Suffolk and Norfolk in the proportion of three to one. The disease appeared to lull during the summer, but in the autumn of 1858 it largely extended its boundaries, and became quite

* Report of the Imperial Academy of Medicine for 1856.

† Hart on Diphtheria, p. 1.

prevalent in the north midland counties. The county of Lincolnshire appeared to suffer more severely than any other in England, no less than eighty-two deaths being attributed to this cause. In the north-western counties it prevailed in conjunction with whooping-cough, and in Nantwich caused thirteen out of fifty-nine deaths. It was observed at Wigan, Liverpool and Hulme, as well as at Rosendale, in which latter place sixteen out of sixty-eight deaths were attributed to its influence.

Diphtheria prevailed at Lima, South America, in 1855, and again in 1858, and is very well described in the concise account given by Dr. Odriazala, a Spanish physician, resident at Lima. In 1855, it appeared in California, and prevailed extensively not only in San Francisco and Sacramento, but likewise in the various mining districts throughout the State. In Placer County it was quite prevalent, but among the districts which suffered most was that of Sonora. The number of cases was very numerous, and the deaths in the aggregate large, but there is no means of determining the relative proportion which they bore to the number affected. Dr. Blake states that at Cache Creek, about twenty miles from Sacramento, the children during 1855 and 1857 were almost decimated by this disease. At Cache Creek, it was principally during the spring and summer months that the disease showed itself; and Dr. Bynum, who had attended nearly two hundred cases, states that the affection always appeared more virulent after the prevalence of a north wind, which is a dry and cold one.

In regard to the conditions under which it appeared, Dr. Blake says it is usually stated, that "it generally prevails in low situations, and to a certain extent this is true; although the most fatal epidemic of the disease that came under my observation was at a mining village called Dutch Flat, situated in a hollow surrounded by hills, about 4,000 feet above the sea. There were thirteen children in the village, all of whom were attacked, and four died. At Grass Valley, which is similarly situated at an altitude of 2,300 feet, the number of cases was great, and the mortality considerable. It was chiefly, however, in the Sacramento valleys and in the valleys of the coast range that the disease was most prevalent."* The disease again renewed its attack in 1858, and is accurately described by Dr. Fourgeaud, in a "Concise and Critical Essay on the late Pseudo-membranous Sore Throat of California."

*Transactions of the 3d Ses. of the Medical Society of California, p. 105.

The most alarming as well as the most fatal outbreak of the disease in the United States occurred in Albany, in 1858. The first case occurred in the south part of the city, on the 2d of April of that year; the second on the 20th of April, in the same section of the town. From this time it continued to increase in numbers and severity. During the twelve months in which it reigned as an epidemic it attacked about two thousand persons, and caused one hundred and ninety-seven deaths; of which, but three were adults.

The first death from diphtheria reported from the office of the City Inspector, in New York, occurred on the 20th of February, 1859, in the practice of Dr. Maxwell; the residence of the child, who was $3\frac{1}{2}$ years old, was in 38th Street, near 5th Avenue. The second death occurred at Manhattanville, on the 25th of February; on the same day, a third fatal case was reported from Stanton Street. On the 5th of March, the fourth case was reported from Vesey Street; on the 10th of March, the fifth from the lower end of 28th Street; on the 23d of March, the sixth from Grand Street, near the East River; and on the 28th of March, the seventh from Varick Street. During the month of April three deaths were reported; in May, three; in June, two; in July, two; in August, four; in September, five; in October, nine; in November, seven; and in December, ten. The whole number of deaths for 1859 was 53, of which 30 were males and 23 females. During the year 1860, the number of fatal cases considerably increased, and the prevalence of the disease as reported at the various Dispensaries was largely augmented. From the 1st to 28th January, 1860, 14 deaths were reported by the City Inspector. For the week ending February 4th, 10 deaths; for that ending the 11th, 12 deaths; week ending 18th, 10 deaths; for week ending 25th, 14 deaths; for week ending 3d March, 19 deaths; for week ending 10th, 9 deaths; for week ending 17th, 13 deaths. The whole number of deaths from diphtheria in 1860 was 422.

Previous to the report of the cases above alluded to, some deaths from diphtheria were returned to the City Inspector, but were reported under the head of croup. The number included in this category it is not possible to determine, but it may be fairly inferred that they were not numerous. During the latter part of 1858 and the early part of 1859, a remarkable tendency to affections of the mucous membranes, especially of the throat, was observed, and this became so general as to constitute an important element in the medical man's daily practice. Nor was this confined to any particular part of the city, or class of persons, but seemed to pervade alike the habitations of the opulent,

and the confined, ill-ventilated apartments of the poor. As yet, however, no diphtheria had been observed, and it was not until about the month of March that medical practitioners here and there, especially among the poor, observed a thin pellicular covering over the tonsils, interspersed here and there with white star-like specks, which gradually expanded in size, and in severe cases came to cover the whole of the tonsils, and extend over the other soft parts of the throat into the larynx on the one side, and the nares on the other. This film-like substance could be easily removed with the sponge in its earlier stages, but became dense and closely adherent as the disease progressed.

Reports of a similar diathesis have been received from every part of the United States; and in many of the larger places, as Boston, Providence, Philadelphia, Baltimore, Richmond, New Orleans, Cincinnati, Louisville, and St. Louis, as well as in the rural districts, well-marked cases of diphtheria have been observed, and in each the bills of mortality have been increased to a greater or less extent through its agency. Although the means of tracing the progress of this disease through the United States do not exist, yet a sufficient number of facts is known to establish that it has not as in England, and to some extent in France, pursued a progressive line of march, but has presented itself here and there in the most erratic manner, and without any apparent reason for choice in the selection of a locality, beyond the general and wide-spread disposition to affections of the mucous membranes which everywhere prevailed, and for the most part still continues.

Sometimes, as in the case of the attacks at Albany and in some parts of California, the disease presented itself with great intensity at the beginning; but as a general rule its progress has been gradual, progressive, and chiefly confined to the ill-ventilated and densely crowded abodes of the poor. Whether the particular causes which have given rise to this disease are destined to terminate in a short time, or to progress in an increased ratio, it is not possible to determine. The language of Trousseau, however, in his report on tubing the larynx, made to the Imperial Academy of Medicine, may not be unworthy of consideration when calculating the chances of the increase or sudden subsidence of the disease in this country. "Those who for twenty-five years," he remarks, "have followed the epidemics of diphtheria which have stricken the capital, may satisfy themselves that the malady has, especially during the last twelve or thirteen years, not only considerably extended, but has assumed a much se-

verer form. Up to 1846 diphtheria scarcely appeared in an epidemic form, and the cases of it which were observed in Paris presented all the characters so well described by Bretonneau in his treatise, and so clearly pointed out by Guersant, in the *Dictionnaire de Médecine*, where this meritorious practitioner confirms in every particular what the illustrious physician of Tours had seen. But in the year preceding his own death, Guersant had seen the grave form of the disease which a little later carried off one of his own children, and which more than ever in these last years has appeared in Paris, as well as some of the Departments, with a violence which forcibly reminds us of the epidemic of the sixteenth century."

The progress of the disease in France, as traced by this eminent practitioner, leaves room for the most lively apprehension as to its future in the United States, and seems to demand of medical men the most careful study of its phenomena and modes of treatment. Most practitioners, who have any experience in the treatment of the disease, agree in the opinion that it is one with which they are not at all familiar, and that it now appears among them for the first time. The writer has conversed with a number of eminent practitioners, in New York and elsewhere, who have been engaged in the active duties of their profession for a period varying from a quarter to half a century, and with here and there an exception, they have declared the disease unknown to them. The inference is fair that if these gentlemen, whose position in the medical world is undoubted, have not met with the disease, it could not have prevailed in the country during the last fifty years, under any other name or modification of circumstances. This corresponds with the experience of British practitioners. "Certain it is," remarks Dr. Ranking, "that the surgeons of this district with whom I have been in correspondence on this subject, either in consultation or by letter, have one and all admitted that they had to deal with a disease which to them is perfectly new, and such I may state is my own conviction also."*

There are, however, a number of highly intelligent members of the profession who believe that the disease is one which is not unfrequent, and only becomes alarming under peculiar circumstances. Among these are Dr. Condie, and Professor Pepper, of the University of Pennsylvania. The latter, in his lecture published in the *Medical and Surgical Reporter*, says: "I have never met with it in this form, (epidemic,) though I have been familiar with the disease for more than

* Ranking on Diphtheria.

thirty years, and there has never been a winter that I have not seen cases of it, and the present winter I do not find my cases any more malignant than usual, or more frequent."

Causes.—The experience in France, England, and the United States goes to show that this disease, like most epidemics, is largely dependent upon a depraved condition of the atmosphere. "Zymotic disease," says Dr. Hart, "is mostly bred by poverty out of uncleanness, and diphtheria follows a general law of what may be called the pathogenesis of zymotic poisons in this respect. It takes up its abode by preference in the hovels of the poor, where the stagnant and pent-up air reeks with animal effluvia—where human beings and domestic animals 'pig' together; above all—and this is the centre to which all sanitary precautions should tend—where the poisonous cesspool and the unflushed privy taint the air with subtle effluvia, that seize their victims by the throat, and bring death with foul touch." These remarks are forcibly sustained by the prevalence of the disease at the present time in New York. Dr. Jacobi informed the Academy of Medicine, at its meeting on January 18th, that 122 cases had been reported on the books of the Canal Street Dispensary as occurring within the year, while many members of the Academy, engaged in a fashionable practice, had not met with a single case.* Dr. Jacobi's experience is, that the average mortality is not so fatal as the reports of epidemics would lead us to believe. Of 500 cases, he has lost but 30. In cases attended with a high fever, cerebral symptoms, intense headache and earache, convulsions, small, frequent pulse, foul smell from the nostrils and mouth, the result was usually fatal. It is not, however, confined alone to this class of patients, but occasionally shows itself under circumstances apparently least favorable for its development, and among these was the child of the Secretary of the Academy, who unfortunately became a victim to this malady. It is but just to remark that at the other Dispensaries the disease has not presented itself in the same numbers as in that under the charge of Dr. Jacobi, and in some but very few cases were observed, amid a large amount of other disease. This might be accounted for either by supposing that it had become localized as it progressed, or that cases were reported as diphtheria at one dispensary which were not considered so at another.

The case of the 75th Regiment of Infantry of France furnishes a remarkable example of the localization of this disease. This regiment, which had been located in three separate garrisons—at Bor-

* Bulletin of N. Y. Academy of Med. for 1860, p. 6.

deaux, Angoulême and Rochefort—were ordered to rendezvous at Avignon. The three battalions were engaged in a fatiguing march during the months of April, May and June, and reached Avignon in July, when they were placed in a part of the ancient Palace of the Popes. From the 14th of August to the 31st of October, 1853, the regiment was nearly disabled by an attack of diphtheria. The effective force of the regiment consisted of 1,686 men, of whom 200 were attacked, as follows:

Of	77 officers,	.	.	.	5 were attacked.
	22 children,	.	.	.	4 “
	134 sub-officers,	.	.	.	10 “
	110 workmen and musicians,				5 “
	1,343 corporals and soldiers,				175 “

During this attack a battery of artillery stationed at Avignon entirely escaped; and, with the exception of a few isolated cases among the inhabitants of the town, the disease was exclusively confined to the 75th Regiment.

Diphtheria seldom occurs sporadically, but usually prevails as an epidemic, and sometimes, as has already been shown, with the most alarming fatality. Its history shows it to be amenable to the laws which regulate zymotic diseases generally, and that its chief abode is among the crowded, ill-ventilated dwellings of the poor—by far the greater number of its victims being selected from this class of society.

General Causes.—During its prevalence, affections of the mucous membranes appear to be more prevalent than under ordinary circumstances; clearly manifesting the presence of some general pervading agency, which, conjoined to local causes, is competent to develop the disease.

Age.—Children are more liable to attack than adults. M. Bretonneau states a case in which the false membrane had enveloped a considerable part of the pharynx in an infant but fifteen days old.* This is a remarkable exception, the greater number of cases occurring between the ages of one and ten years. The age of five or six, however, is that in which the child appears to be most predisposed to an attack.

Sex.—Boys are more liable to attack than girls, in a slight degree. Valleix's observations lead him emphatically to adopt this conclusion. Rillet and Barthez are of the same opinion, and believe the susceptibility of boys to the disease is especially marked from eight

* Bretonneau on Diphtheria, p. 36, obs. 4.

to ten years.* This, however, is subject to variations, as in some instances the number of girls attacked has exceeded that of the boys.

Temperament.—Dr. Bouillon-Lagrange, who observed the disease in the *Department de Seine-et-Oise* in 1857 and '8, treated seventy-three cases. Of these, there were of

Lymphatic Temperament.....	50
Sanguineous.....	11
Lymphatic-Sanguineous	7
Bilious.....	5

—
73

There were of feeble constitution.....26

“ strong “30

“ middling “17

Twenty-one exhibited scrofulous traits. In point of healthy or unhealthy locality, 52 were in healthy situations and 21 in those not so. Of these 73 cases, 23 died and 50 were cured.†

Hygienic Condition.—With occasional exceptions, as in the instances of the outbreaks at Paris, in 1855, and Boulogne, in the same year, those children who possess feeble constitutions, or are surrounded by the concomitants of depraved hygienic influence, for the most part become the victims to this disease. It is therefore usually found in those parts of the town inhabited by the poor, and seldom invades the well-ventilated districts occupied by the more opulent. *Humidity*, and especially *humidity conjoined to a depressed temperature*, are supposed to exercise a decided influence in the development of diphtheria. The observations of Ghisi, at Cremona; of Bretonneau and Gendron, at Tours; of Chomel, at Paris; Ferrand, at Chapelle-Véronge; of Trouseau, Bourgeois, Iespines, and André, in France generally; of Ranking and Hart, in England; and of Fourgeaud, at San Francisco, and Willard, at Albany, go to establish the great dependence of the disease upon this condition of the atmosphere.

The conclusions of the French Commission are anything but satisfactory on this point: “it is impossible” they say, “to fix any period for its duration or mode of attack. Insidious in individual cases, it is equally so in its march; a first case may appear and be immediately followed by several others, or these may appear at long intervals. It is but slightly obedient to meteorological conditions.”

* *Traité Clinique des Maladies des Enfants*, vol. ii., p. 256.

† *Gazette Hebdomadaire de Med. et de Chir.*, vol. vi., p. 361.

Is it contagious?—The opinion of authors is varied as to its contagiousness. Jurine and Bricheteau do not believe that it is susceptible of transmission in this method; while Wichmann, Boëhmer, Field, Rasen, Guersant, Bretonneau and Miguel contend for its contagiousness. Rillet and Barthez believe that if contagious, it is far less marked in this particular than most eruptive diseases.

M. Penant, who observed the epidemic in Vervius, France, in 1853–4, and whose report was pronounced by the Commission on Epidemics, of the Academy of Medicine, the best that was presented to them, took particular pains to mark the progress of the disease. The number of inhabitants in the arrondissement of Vervius, in 1853, was 1,073, of which 855 were males, and 848 females; of this number 68 were attacked with diphtheria; of these, 10 were adult males, 13 adult females, and 45 children; of the 68 cases, 34 were males, and 34 females; 20 were under 5 years; 12 between 5 and 10; 13 between 10 and 15, and the remainder above this age; of the 34 cases among females, 17 died; of the 34 among males, 10 died; total, 27; of these, 13 died before the age of 5; 10 between 5 and 10; 3 between 10 and 15, and 1 above that age. The disease appeared at first in separate and isolated parts of the commune, invading successively or simultaneously a certain number of houses, sometimes near at, others more remote, often attacking but a single individual, and as frequently manifesting itself in several members of the same family. The first cases were isolated, and referred by M. Penant to some epidemic constitution of the atmosphere, of which he does not pretend to give any account. After the disease became firmly located, he is impressed with the belief that, under the influence of bad air, confined apartments, and uncleanly habits, the disease is susceptible of propagation from individual to individual; in proof of which, he cited the case of a female who carried her own infant several times into a room occupied by a number of patients laboring under diphtheria. The infant was shortly after attacked, and soon died.

M. Perrochaud, in his account of the fatal epidemic which prevailed at Boulogne, says that the proofs of contagion were so manifest that no medical man pretended to deny them. He cites the case of a single school in which 17 cases occurred. In contradistinction to these, Dr. Pichenot mentions the case of a child who was accustomed to trample with its bare feet upon the shreds of false membrane ejected in vomiting, without contracting the disease. He remarks that this is an isolated and remarkable example.

The Committee of the French Academy on Epidemics say: "We do

not hesitate to declare diphtheria contagious. It appears to us incontestable, and the epidemic of 1858 furnishes numerous examples that the contact of a healthy individual with one sick of diphtheria is one of the causes of the development of the malady.* The only well-authenticated cases of this kind which have come to the knowledge of the writer in the United States are those of the late Professor Frick, of the University of Maryland, and Dr. Cooke, of Brooklyn.

Dr. Donaldson thus describes Dr. Frick's last illness:

On Tuesday, 20th inst., 1860, he performed at the Infirmary the operation of tracheotomy upon a negro woman, who was sinking from epidemic diphtheria. From early childhood he had shown a peculiar susceptibility to idiopathic poisons. He never attended a case of scarlet fever that he did not suffer with his throat. So in this instance; in attempting to save the life of this poor creature he apparently at least inhaled the poison, and the next day complained of soreness about his throat. That night he had a severe chill, notwithstanding which in the afternoon he went to the funeral of a friend, and stood in the grave-yard on the damp ground with his head uncovered, when there was blowing a chilling March wind. That night he had a severe chill, with increased swelling and pain about the throat; and the next morning, Thursday, when his uncle and friend, Dr. John Buckner, was called to him, already the foul disease had taken a firm hold on him, and the membrane, characteristic of diphtheria, was forming. The agony of deglutition was so great that it was almost impossible to accomplish it. Friday and Saturday were days of intense agony. He went from chair to chair, from bed to lounge, trying every position that might bring breath, and with it ease.† At his own urgent solicitation, tracheotomy was performed, which gave but temporary relief, and he died on the following Sunday.

The following account of Dr. Cooke's case was furnished by Professor Willard Parker, who was his attending physician:

I was requested to visit Dr. Cooke, of Brooklyn, December 16th, 1860. He was a man of active habits, in full practice, aged about 60, but seemed not more than 50; he had never been sick before. About two weeks before I saw him he had been called to attend a severe case of diphtheria. After a few days' attendance, he complained that he had contracted the disease. He became feverish; his throat was very sore, and swollen; he lost his

* Transactions of the Imperial Academy of Medicine, 1860.

† Gross' American Medical Biography, p. 834.

appetite, and complained of great prostration. He saw some few patients at his office, and attempted to go out to attend to some business, but soon found himself too weak to walk. On the 14th his brother, a physician, urged him to give up business and take care of himself. He was unwilling to yield to this advice. On the 16th the Dr. saw his brother again, and found him so ill that he determined to remove him to his brother's residence in New York. After the removal, I saw the patient at about 10, p. m. The features of his case were very unfavorable. He was in bed; skin hot and dry; pulse 120, small and feeble; respiration indicative of exhaustion; tongue thickly coated; throat sore, swollen, livid, and all the parts covered with an inspissated mucus; neck on right side tumid, and pain in the right ear; no appetite, but thirsty for water; the bowels had been acted upon by blue pill and other cathartics; kidneys acted well. Prescribed at once gargle of pure brandy and tr. capsici, quinine, brandy and water, beef tea. 17.—My patient seemed to feel better; pulse had diminished in frequency, and was fuller; bowels were somewhat tumid and irritable; the stimulating and tonic course was pursued. 18.—Remained about the same. 19.—Contrary to advice, the patient got out of bed and visited the water-closet, and became exceedingly *prostrated*; he was not permitted to make the attempt to rise again. The pulse ranged from 120 to 130, and was irregular; the tongue became *very dry* and black; he could lie only on the back; the skin was dry and parchment-like to the feel; there was a general œdema; vibices on the ears. 20.—The urine was examined, but contained no albumen. On the 21st, 22d and 23d, he continued to grow weaker; no subsultus; mind clear; evacuations became involuntary, and the respirations indicated the most profound prostration. He sank, and died on the morning of the 24th. I never witnessed such prostration in the worst cases of ship fever. In this case there was no petechiæ, no delirium, but vibices on the ears and back, and a general œdema.

The appearance of the disease at various and remote parts of the American Continent about the same period of time, and the absolute impossibility of communication between the first cases of the disease in the various places where it has manifested itself, clearly establish the fact that its introduction into any locality where it has appeared is not due to contagion. The writer is inclined to the belief that under certain favorable conditions, after being introduced, it is susceptible of transmission by contagion.

(To be continued.)

Transactions of the Medical Society of the County of Kings.

1859. November.—Dr. HUTCHISON gave the following history of a case of *Neuralgia of the Testicles* in a man *æt.* 60 years: Saw him for the first time October 25th; complained of great pain in the right testicle, hip and groin; no fever, and no tenderness. Ordered a tobacco poultice, and chloroform and camphor internally. 26th.—Occasional pains in testicles. 27th.—Had suffered from a good deal of pain during the night, some vomiting; ordered McMunn's Elix., with immediate and permanent relief. A singular feature in the case was, that the tobacco poultice *produced a soporific effect.*

Case of Cartilaginous Tumor of the Ribs. By Dr. C. E. ISAACS.

In the month of April, 1859, I was consulted by Mr. W., *æt.* 35, and in robust health, on account of a tumor situated on the anterior and right side of the thorax. It was about the size and shape of a goose-egg; immovable, exceedingly firm and hard to the touch, and appeared to spring from the cartilages of the fifth, sixth, seventh and eighth ribs. The patient had first perceived it about four months previously, when it was only of the size of a nutmeg. He had never experienced any pain in the tumor, nor any difficulty of respiration, and was only uneasy and alarmed at its steadily increasing growth. He attributed it to having received a slight contusion on the ribs some two or three months previously to the discovery of the tumor. After careful examination, I concluded that it was cartilaginous in its structure. I prescribed the iodide of potassium, in gradually increasing doses, for five or six weeks, and painted the tumor with the tincture of iodine, but with very little hope of success, as I knew of no medicine which could cause the absorption of cartilage. These means having proved useless, it occurred to me to try compressed sponge, which has lately been so much used, and strongly recommended in various surgical diseases, by Dr. J. P. Batchelder, ex-President of the Academy of Medicine of New York. A large piece of sponge which had been compressed into a thin cake, about half an inch thick, and four inches in diameter, was placed upon the surface of the tumor, and over this a bandage nine yards long was firmly and evenly applied. It was then moistened with water. The expansion of the sponge, and the corresponding resistance and resulting pressure upon the tumor, were very great; so much so, that the patient complained considerably of the pain and inconvenience for the first few days of the appli-

cation. This, however, gradually diminished, so that he was enabled to endure the bandage daily, for a period of two months, at which time all traces of the tumor had disappeared. It is now nearly three months since the last bandage was applied. There is no sign of any return of the tumor, and the patient remains in perfect health. If a similar case should occur, are there any other means which could be *safely* applied to effect its removal?

Double Crural Phlebitis. By DR. J. G. JOHNSON.

On the 2d of November I was called to attend Mrs. M., in her third confinement. She is a thin, spare lady, of an exceedingly nervous temperament, and much prostrated by anxiety and care for one of her children, who had been dangerously ill.

Labor progressed rapidly, and the second stage lasted less than one hour. Convalescence was rapid, and no unfavorable circumstances retarded, so that on the 11th I discontinued my attendance, leaving the patient sitting up. On the 14th I was called to see her, and found her complaining of great pain in the trochanter major and in the sacrum. Careful examinations of both limbs was made, and no swelling, pain or tenderness noticed, except a slight amount at the left saphenous opening. Mass. hyd., gr. xv., was prescribed, and an anodyne at night. The next morning Dr. Marvin saw the case, in consultation. The crural veins were hard, corded, and extremely painful; still, there was very little pain in the calf of the leg. The gastrocnemius muscle could be pressed against the tibia, without the patient complaining. A dozen leeches were directed to be applied along the inner edge of the sartorius muscle, and the blue mass to be continued, 5 grs. every three hours. In the afternoon the leg and thigh were greatly swollen, and the patient was relieved from the suffering. The bleeding from the leech-bites still continued, and was favored by the application of poultices. An anodyne was prescribed for the night. The next morning the case was seen by Dr. Marvin again, in consultation. The whole thigh and leg were immensely swollen. The skin was tender and shining, and did not pit on pressure; there was a complete loss of power in the limb. The intense pain was gone, but on pressure over the crural veins, they were found tense and corded, and painful. Dr. Marvin advised the application of a blister, seven inches long by two and one-half inches, to be applied over the cords of the crural vessels, the leech-bites being covered by adhesive plaster; this was done. The next day the patient seemed so much relieved by the application, that a second blister was applied along the course of the veins and

extending down into the popliteal space. The blue mass was also continued, 5 grs. every three hours. The patient passed a very comfortable night, and the next morning she expressed herself much relieved by the action of the blisters, and desired that a third one should be applied over the calf of the leg, which was done. The swelling of the thigh was found, at this visit, to be disappearing, the pain in the abdomen to be subsiding, and the thigh pitted on pressure. The patient's appetite began to improve for the first time, and oyster broth was allowed.

The next morning, 19th, the pain had almost entirely left the limb. The numbness and heaviness of the limb are less; the swelling is rapidly subsiding. The swelling continued to subside rapidly, till, on the tenth morning from the attack, it was found that the slight puffiness of the ankle, and some little tenderness over the course of the vessels, were the only remaining traces of the phlebitis. The patient could move the limb easily, flexing both ankle and knee joints.

Two days later, at my morning visit, I found the patient complaining of some little pain in the lower part of her abdomen, on the right side, and through into the small of her back; she was somewhat feverish, and her countenance had an anxious aspect. I feared that a phlebitis of the opposite limb might be commencing, and directed the application of a blister over the saphenous vein, though there was no pain. The patient neglected having this done, and the next morning the whole limb was found much swollen from the toes up, and completely powerless; the skin was tender and shining, and the limb did not pit on pressure. A blister seven inches long by two and one-half inches broad was applied over the crural vessels, and the blue mass continued, with anodynes at night. A succession of blisters was applied. The limb, however, was somewhat slower in resuming its shape. About one month from the commencement of the second attack, the limb was tightly bandaged, and at night the bandage, which was found loose from the subsidence of the swelling, was tightened, and in four days the swelling had completely subsided in the limb, so that she could use it easily, bending ankle, knee and hip joints.

Peculiar Symptoms following the Use of Coffee as an Antidote for an Over-dose of Godfrey's Cordial. By DR. JOHN G. JOHNSON.

On Christmas eve, I was called to see a child in Concord Street, who had been poisoned by its mother administering an over-dose of Godfrey's Cordial. I found the child, a babe of five months, in a state of complete narcotism. He was held in his mother's arms, but his

head fell powerless; no pulse could be felt at the wrist; the extremities were cold. I learned that the mother had sent for Godfrey's Cordial, and had given a tea-spoonful about two hours before I saw the child, and an hour after that, had given a tea-spoonful and a half more, thinking that the child would not get to sleep, as it had been very irritable from an eczema which completely covered his head. The mixture had been put up by a clerk not accustomed to put up prescriptions, and probably contained at least one-half laudanum, with simple syrup and essence of sassafras. The precise quantity could not be ascertained, as he denied having put up the mixture.

Carrying my finger far down the child's throat, I attempted to excite vomiting by gagging. He was too far gone for this, however; finding my attempts unsuccessful, I depressed the tongue with my finger, and poured a little coffee down past my finger into the throat; at the same time, attempts were made to rouse the child by beating with a wet handkerchief, and by dashing water into his face. The strong coffee was also continued warm, and in about three-quarters of an hour we had the satisfaction of seeing the child vomit. The other appliances were now omitted, and directions were left to continue the coffee for an hour or two, till the effects of the opium should wear off. Fearing, however, that the child would relapse again, the parents continued to give the coffee at intervals of every fifteen minutes during the night, till six o'clock the next morning, when I saw the child, and directed that the coffee should be discontinued. This was done, and the child slept for about one hour, and awoke with a short, startling cry and twitching of his hands. This continued unabated all the day, the child constantly starting as if about to go into a convulsion, and uttering one of those sharp cries. The bowels moved very freely during the day, and each movement appeared as if coffee alone had passed, having simply the color, smell, and consistence of coffee. The pupil of his eye was contracted so as to be hardly the size of a pin's head, and there was a marked brilliancy about the eye. The attempt was made to quiet the child by nursing; but instead of nursing, he would throw up his hands and shriek out in the same way. *Lac. asafœtida* was given, both by the mouth and as an enema, but the child continued in this restless condition through the whole night, constantly shrieking out; and if an attempt was made to lay the child down, the twitching would increase so that it would seem as if the child would go immediately into convulsions. The next morning the child was much exhausted, but still the same starting cry, though feebler, was continued. He had not slept for a moment, nor could

they lay him down. Dr. Marvin saw the case in consultation. He advised that wine whey should be given in small quantities to support the child; that the asafœtida should be continued as before, by mouth and by enema, and if the child did not become quieted by night, tr. opii camphorat., in three-drop doses, should be given to quiet the babe. This was accordingly directed. The child continued during the day in much the same condition as previously, with the sudden twitching of the arms, with the startled cry, and refusing to nurse. At night the paregoric was commenced. The child, after taking two doses, slept in its mother's arms for about a half-hour, when it awoke in the same startled manner. The attempt to lay him in the cradle, as before, produced so much aggravation of his symptoms, that it was abandoned. The movement of the bowels had now more of a greenish-black appearance, and the twitchings and cry would be suspended for a few moments, through exhaustion, and again commence; support by wine whey was continued during the next day, and at night the child slept four hours, after using nine drops paregoric in divided doses. The child on awakening had some of the starting and cry, but not as marked, and continued for several days to show this disturbed nervous action.

I have been unable to find a similar case in the authorities to which I have access, and can attribute this extreme wakefulness continuing for three days—this startled, nervous motion of the limbs, and the sharp cry, only to the excessive amount of coffee which the child had been given; they can hardly be attributed to the opium.

A New Instrument for Dilating Strictures in the Urethra. By J. H. HOBART BURGE, M.D., with illustrations.

I present for your examination a new instrument for dilating strictures in the urethra. You see here two specimens, one straight and the other curved; but they are the same in principle, the form being varied only for convenience in reaching all parts of the canal. A very few words will suffice to make plain my design in the construction of this instrument. I believe, in attempting to dilate a stricture in the urethra, there is an almost universally recognized advantage in commencing with the largest bougie that can be introduced without violence. The dangers attendant upon the passage of very fine instruments are so apparent, even in those cases where we are obliged to resort to them, that I shall consider the rule as established, that we are always to commence with the *larger*, and leave the smallest only as a dernier resort. Now, let us suppose we have a complete set

of metallic bougies. A case presents—we try successively numbers 8, 7, 6, 5, 4, 3, 2, 1, at each introduction and withdrawal irritating the healthy portions of the urethra, and perhaps accomplishing nothing so far as the stricture itself is concerned. It may happen that so much violence has been done by these efforts, gentle though they be, that No. 1 cannot be introduced, and puncture of the bladder may become necessary; all other medical and surgical means failing. We will, however, suppose No. 1 passed fairly through the strictured part, and no false passage made. Sooner or later it must be withdrawn, to give place to No. 2. The mucous membrane, stretched and irritated by our previous efforts, falls at once into folds, especially at the point where the stricture commences, and we are by no means sure of success with No. 2, and may even find it impossible to *re-introduce*



No. 1. An instrument was devised some time ago by Whakeley, of England, which admitted of the introduction of a cylinder, sliding upon a stile already in the passage. This was an important point gained, since, by obviating the necessity of withdrawing one to introduce the other, it lessened the number of manipulations, and decreased the amount of irritation and the danger of making a false passage. This instrument, however, by no means reached the advantage which I aim to secure. In the construction of that which I now present to the profession, I have retained all the excellencies of Whakeley's instrument, so that one cylinder may slide upon another already introduced; but I beg you to note particularly, that this is exactly the reverse of the plan which I propose. Adhering to the excellent rule taught me by my betters, I begin with the largest cylinder, (the smaller sizes are all within, and may be projected by the knobs near the handle;) having carried this as far as it will easily go, I then proceed with the next size—then with the next, and so on, gradually from larger to smaller, always retaining each in place as a guide to the next; and thus keeping the mucous membrane sufficiently stretched to prevent any fold from obstructing the passage of my instrument, I have nothing to contend with but the stricture itself.

This device is so simple that I need say no more. I respectfully submit it to your criticism.

December. Case of Measles preceded by Membranous Croup. By DR. BELL.

The patient a hearty boy, æt. 11, having, according to his mother's account, had measles once before. The croup differed from its ordinary course, in that it came on in nightly paroxysms for three nights, with mitigation of all the urgent symptoms before morning, in a manner common to *laryngismus stridulus*. On the afternoon of the third day the patient complained of a good deal of lassitude, succeeded by chilliness, and was for this put upon quinine and chlorate of potash—two grains of the former to five of the latter—every three hours. That night the paroxysm was less severe; still, he required an emetic dose of tartar-emetic, as he had the two preceding nights, before he could rest. Next morning there was increased constitutional disturbance, hot skin, quickened respiration, and frequent, small pulse, together with a sniffing, which, upon examination, was found to be caused by membranous exudation. The membrane extended down from the posterior nares over the back of the fauces, out of sight, and also covered the tonsils posteriorly.

The dose of quinine and chlorate of potash was ordered every *two*, instead of every three hours, as at first given, and so continued for forty-eight hours, without other medicine. That night he had a slight paroxysm, stridulous coughing, but it quickly passed over under the influence of a warm bath. By the end of forty-eight hours there were softening and expulsion of the membrane in easily broken-down flakes, and the freshly denuded mucous surface discovered to be studded with the *rash of measles*, now first declaring its presence. The membranous exudation in this case was evidently limited to the upper portion of the respiratory tract, but up to the period here pointed out, when measles propitiously set in, there was good reason to apprehend the usual and complete progress of true croup. After measles, the patient proceeded to favorable recovery.

DR. ISAACS reported two cases of ranula, both of large size—as large as the half of a hen's egg—one in a woman, which had existed about three years. After excising a piece of the sac and pressing out the contained fluid—resembling white of egg—he probed it thoroughly in all directions with the end of his finger, so as to perfectly clear it, and then injected it with tinc. iodine. It soon after got well.

The other case was congenital, in a girl, æt. 4. This was treated as the former one, but on excising it had a good deal of hæmorrhage. After applying the perchloride of iron ineffectually to arrest the bleeding, he resorted to Squibb's persulphate; this stopped it instantly.

This sac contained a milky fluid, and besides it a quantity of putty-like material, which, under the microscope, was found to consist of epithelial scales. This is an exceedingly rare form of the disease.

DR. ISAACS also reported a case of unusual displacement and difficult reduction of fractured forearm—case of a child having fallen on the ice—fracturing both bones near the wrist. The hand was found turned outward, at *right angle* with the arm. Administered chloroform, and finally succeeded in replacing the bones, since which patient has got along well.

A fourth case by Dr. Isaacs was that of a woman with a small vascular tumor on margin of meatus urinarius. It had escaped detection, and been for a long time troublesome. After removing it, he penciled the surfaces with *nitric acid*, applied by means of a pine stick. The doctor mentioned in this connection, that he had frequently applied nitric acid lately in this manner, which he found to be very advantageous, as it did not spread as when applied by means of a brush.

DR. MITCHELL reported a case of retention of urine, in consequence of extreme sensitiveness of meatus urinarius, succeeding labor.

The patient could not bear the slightest touch of the catheter, or any effort to introduce it.

The difficulty was completely overcome by the administration of *chloroform*.

DR. LANDON reported an anomalous case of hæmorrhage from the bowels. The patient, a woman æt. 45, had been subject to frequent and often profuse hæmorrhage of the bowels, for 16 years, yet in all other respects she appeared to be well, and only suffered from it when very excessive; she then became pale and afterwards sallow, assimilating the appearance common to malignant diseases. From such a condition, however, she soon rallied and regained good health, became ruddy and fat. She has home two children, and seems in all other respects perfectly well.

Dr. Landon added, that the most decided relief he had ever given his patient was by the administration of a large dose of calomel.

There were three cases of malignant pustule reported—one by Dr. Bell, and two by Dr. Isaacs. These cases all recovered under the use of quinine and brandy, freely given; the pustule being thoroughly incised and poulticed.

Strangulated Inguinal Hernia—Operation—Division of the Epigastric Artery. By DR. ENOS.

Mr. H., æt. 57, had ruptured himself about thirty years ago, at sea. He has worn a truss most of the time since, but with indifferent success; the bowel frequently coming down beside it. He had generally been able to reduce the hernia. Two days before I saw him it had come down larger than usual, and he could not return the tumor. He sent for Dr. Conkling, who by means of chloroform succeeded in reducing it, he thought, entirely; but the next day it was down again as large as before, when the Dr. tried taxis again, but could only return a part of it. When I saw him I made careful efforts to return the bowel. Some of it appeared to go back, but there was quite a considerable portion that would not. As there were no constitutional symptoms of strangulation, as part of it seemed capable of reduction, and as an impulse was given to the tumor by coughing, it was thought best to apply ice to the part, and introduce a three-grain opium suppository into the rectum. The next day being no better, and having a tendency to nausea and pain at the umbilicus, it was deemed best to operate. I was kindly assisted by Drs. Conkling, Jones, and Ormiston. As the hernia was scrotal, as it came down on the outside of the cord, as it was pyriform in shape, and made its exit from the body at a point midway between the spinous process of the ilium and symphysis pubis, it was supposed undoubtedly to be an *indirect inguinal hernia*. The tumor was cut down upon in the usual manner, and the sac divided. The stricture was very deep and tight, and at the internal ring, a probe-pointed hernia bistoury was with some difficulty introduced, and the stricture divided upward and a little outward. The bowel was returned, but the hæmorrhage was such as made it evident that an artery of considerable size had been divided. So copious was it, that I immediately enlarged the wound towards the linea alba, as far as the rectus muscle, when the retracted lower cut end of the epigastric artery came into view and was secured. The hæmorrhage continued from the upper end, which was also, but with much more difficulty, found and ligated. The bleeding then ceased. He must have lost 8 or 10 ounces of blood. The patient's pulse, however, was about the same as before the operation. The wound was closed in the usual way, and twenty drops of Squibb's fluid extract of opium given. The next day he was quite comfortable; except a troublesome cough, which he had had some time, annoyed him much. On the 3d day his bowels were moved by an enema; opium continued; some pain in his bowels, and some vomiting; on the 4th day he

began to fail, and died on the morning of the 5th. There was some stercoraceous vomiting both before and after the operation. The *post-mortem* examination showed that the hernia must have started somewhat as a direct one on the inside of the epigastric artery, (which was found to come off as usual from the external iliac,) and pushing that vessel before it to the outside. It did not divide or push before it the conjoined tendon, as is usual in direct hernia, but it mounted above that structure, and made its appearance at or near the internal ring. The tumor overlapped the cord and descended on its outer side; but the cremaster muscle did not form one of the coverings. The epigastric artery then must have formed an angle round the neck of the sac, for it was found to enter the sheath of the rectus in its usual place at the lower part of the middle third of that muscle, so that any ordinary incision for the division of the stricture must have divided the artery.

The patient died of general peritoneal inflammation; intestines were everywhere slightly adherent; no blood was found in the abdominal cavity; the incarcerated bowel was the small intestine.

It is doubtful if this accident had much to do with the fatal result, but the extra handling of the parts necessary to secure the vessels may have increased the inflammatory condition. However, it is quite probable that the patient, who had been toothless for a long time, and therefore below par, would, with his distressing cough, (which, in spite of opium, kept his bowels in commotion,) scarcely have recovered had no such accident befallen him.

Sir Astley Cooper relates a case in which he divided the epigastric artery in operating for a direct hernia. Pressure was made upon the groin in the situation of the epigastric artery, in order to prevent the hæmorrhage, and apparently with success; but four hours afterwards there was a copious discharge of blood; further pressure was made without success, and the man died in ten hours. The abdomen was distended with blood.

Mr. Davie allowed him to mention another similar case of his, in which he cut the epigastric artery. Mr. Geraud and Mr. Lawrence each had a similar case.

Cancer of Stomach, Liver, &c. By J. BALL, M.D.

On the 6th of September last, I was called to see an old gentleman, 93 years of age, who was suffering considerably with pain in the epigastric and right iliac region. Upon examination, I found a good deal of tenderness over the region of the stomach and liver, with

an enlargement of the latter organ, extending down to the crest of the ilium.

The patient had been all his life what is called a *free liver*; indeed, he was one of the most *consistent* drinkers, I suppose, that ever lived. Instead of paroxysms, as some men have, and then sober up again, he at least for 40 years, it is said, knew not the pain of returning *sensibility*. How much his habits had to do with his disease, which ended his earthly career, is a matter of some conjecture.

When I first saw him he had occasional vomiting of blood and vitiated bile; afterwards the vomiting became more frequent, and extremely offensive, from being mixed with stercoraceous matter; he could at any time retain but a very small quantity of nourishment, and that of the simplest kind, and died rather from inanition than physical suffering.

His death occurred October 11. Autopsy, 8 hours post-mortem: Upon opening the abdomen, the stomach observed to lie to the left of the mesial line, pushed out of its normal position by the enormous growth of the liver; the pancreas and the part of the stomach contiguous were found to be one hardened, cancerous mass, as you will see upon the examination of the specimens before you. The *liver*, you will observe, is in the same condition. The heart is about the usual size, but covered with fat. The kidneys are both diseased, containing several large *cysts*. All the other internal viscera were comparatively healthy.

Case of Uterine Phlebitis, with Black-Vomit. By A. N. BELL, M.D.

A lady, æt. 35, after a regular labor of five hours' duration, was delivered of a female child weighing $6\frac{1}{2}$ pounds, on Thursday, P. M., 5th May. Saw the child put to the breast and nurse finely.

Called early next morning; found mother and child both doing well—the mother complaining somewhat of *after-pains*, but they were not very troublesome. She had slept pretty well. Recollecting, however, that I had given her camphor in previous confinements, which had the effect of allaying the pains, she asked me to leave a prescription to be taken if necessary to procure sleep. I directed

R.—Camphor,	. . . . .	℞j.
Alcohol,	. . . . .	q. s., ft. pulv.
Et add Syr. Acaciæ,	. . . . .	℥ij.—M.

S. Take table-spoonful every hour and a half, if necessary, to procure sleep.

I was called Saturday morning at three o'clock. Found the patient

in great suffering from constant pain in abdomen, but at intervals of about half an hour it was very severe, and compared by her to those of labor. Made vaginal examination—found lochia sufficient—vagina and uterus both as usual in recent parturition. The uterus could be distinctly felt contracted unusually low down in the pelvis, but when the pains were at their acme, it evidently acted with renewed vigor, as the lochia was more abundant at the time.

She had taken three doses of the camphor without any alleviation of pain, and soon after taking the last dose, just before I was sent for, vomited the liquids she had taken into the stomach, tinged green.

I ordered an enema of gruel, containing two ounces of castor oil, which, while I remained in the house, caused a large evacuation from the bowels. I then gave twenty drops of laudanum, and directed the dose to be repeated every hour till easy.

Was sent for again in the afternoon; pains worse; gave at once forty drops of laudanum; four twenty-drop doses had been given as directed in the morning, and this direction was now reiterated. Applied flannel cloths wet in camphor liniment to bowels and to *left hip*, which was now complained of as aching. Occasional vomiting of green fluid had continued since morning, and thirst had increased, with no ability to retain any food whatever.

Sunday morning complained less; pains had nearly subsided; none in hip. A little tympanitis, and uterus could still be felt well contracted and low down. On firm pressure, a little tenderness of abdomen. Tongue firm and dry; much thirst, and no vomiting since midnight. Lochia scant. Directed castor-oil enema as before given, and a bottle of citrate of magnesia to be taken in small quantities at a time. Fomentation to abdomen of flannel wet in camphor liniment next to the surface, and wet flannels over it continued. Extremities to be bathed frequently. For food ice-cold rice-water, to be given by the spoonful at short intervals.

2 o'clock, P. M.—Half the magnesia taken; vomited twice material of same character; three dejections. Apply flannel wet in hot water, and mustard to epigastrium; continue rice-water, and frequent bathing of extremities in cold rum and water.

8 o'clock, P. M.—No more vomiting; bowels have been open four times; large bilious stools; lochia entirely ceased; pulse more frequent—120; complains of great prostration; frequent sighing.

Directed	Camphor,	.	.	.	gr. xvijj.
	Alcohol,	q. s.,	ft. pulv.,	et add	
	Morphiæ sulp.,	.	.	.	gr. j.
					Div. in caps. vj.

S. Take one immediately, and if it sets well, repeat every two hours till sleep. Continue same food.

Sunday Morning.—Slept sound, but prostration increased; taken two capsules. Bowels open three times; stools large, dark, bilious matter; but little fœtor. Mouth parched; pulse still 120—weaker. No tenderness of abdomen; uterus still easily made out—low down. More tympanitis; and when bowels are open, wind passes off in large quantities. Gave tea-spoonful of brandy; and by remaining an hour to observe effects, found it salutary, and grateful. Directed its continuance, every two hours; a tea-spoonful in water, or in the rice-water—the only food permitted.

1 o'clock, P. M.—Bowels open twice; no vomiting. Likes the brandy, and feels better, but appearances about the same. Continue same; and, as bread is asked for, a little permitted with the brandy and water.

8 o'clock, P. M.—Feels better, but not like sleep. Continue the same, and give the capsules if necessary, to produce sleep.

Monday, A. M.—Countenance more anxious, and she expresses alarm at her condition; thinks she will not get well; yet feels no worse, excepting “tired.” Has taken but one capsule; had several naps. Now complains of unbearable lassitude, and has frequent sighing. Pulse weaker—128. Mouth not so dry, but excessive thirst. Ejects water soon after swallowing it, if taken more than a few swallows at a time. Ordered cloths wet in mustard-water to epigastrium, and brandy to be given more freely. Is tired of the rice-water, and asks for bread instead, which is permitted with the brandy. Continued to have easy vomiting of whatever she took in the stomach all day; and bowels not having been open, while tympanitis had increased, at night had administered an enema, consisting of lac. asafœtida and starch. A great deal of wind passed off with this, and a small quantity of fæces. After which, the womb could still be felt, without tenderness, as before.

Tuesday Morning.—Was sent to early, for permission to have oysters—“had had a better night.” I sent word to chew beef and swallow the juice—would be better than oysters—and that I would see her soon.

On calling, found her chewing the beef with a relish. Just then her husband, who had been absent two months, arrived. She expressed herself as being very glad, as she should now die happy; that she had prayed to be spared till he came, and was now going to die. Yet she appeared better, and expressed herself as feeling so. Pulse

120, same character as on the day before. Still a good deal of thirst, but mouth more moist. During this day she seemed to suffer but little; vomited the fluids taken into the stomach two or three times, but took and retained more food, beefjuice, and rice-water, than since beginning of illness. Gave no medicine.

Wednesday Morning.—Countenance sunken; eyes deep in their sockets, and whole expression bad; pulse 130, small and compressible; skin hot, and perspiring; slept some, but easily roused, and thinks she will die soon. Ejected fluids from stomach two or three times soon after drinking. Still likes the beefjuice, and is permitted to take all she can, and brandy, every hour—a swallow or two, mixed with two-thirds water. About 12 o'clock she asked for coffee, and took a few swallows. Soon after this, she ejected what appeared to be the coffee; but on seeing it, she remarked, "That is black-vomit, and I am now surely going to die." I called soon after this, and on examining the fluid ejected, was first of the opinion that it was only the coffee, of which it smelled. But soon after she spit up, without effort, a much larger quantity—considerably more than the whole amount of coffee taken—and appealed to me to know if it wasn't *black-vomit*.

From this time, about two o'clock, P. M., until eight, she continued at short intervals to eject fluid strikingly like the black-vomit of yellow fever. Meanwhile, the collapsed appearance increased, and brandy seemed to have lost its effect. At 8½ o'clock, Dr. Isaacs saw her with me. We substituted Champagne for the brandy, and she partook of it freely, but without any response, and the same hot applications externally. Collapse increased, and she died at 11 o'clock, without a struggle.

Dr. Isaacs examined some of the black-vomit under the microscope, and found it to consist of broken-down blood-corpuscles and *débris* of animal tissue.

Dr. ISAACS reported that he was called in consultation to see a child, who five or six days previous was by the parents thought to have scarlet fever eruption, which receded. Dr. Bennett was then called, and he found the child laboring with dyspnoea, in consequence of a large hard swelling in the left parotid region, extending downward, and evidently pressing on the trachea.

On consultation, it was deemed advisable to perform tracheotomy, as affording the only chance for life.

In operating, a plexus of veins was found, completely overlapping the trachea, which it was necessary in part to cut through. This

obstacle being overcome, the operation was conducted while the child was, to all appearance, in articulo mortis. Soon after, however, warmth returned, the pulse rose, respiration became easier, and the child lived 24 hours.

DR. BELL reported a fatal case of gastric fever. The subject was a delicate little girl, *æt.* 14; the next morning, after a party, was taken with nausea and vomiting, and severe pain in the right hypogastrium. Skin cool, pulse frequent and very compressible, tongue loaded with a thick white coat, red at the edges, and unusual redness of mouth. There was excessive anxiety, and almost incessant motion. When called, two warm-water injections had been given, (the bowels not having been open for three days,) and expelled clear. The child being unable to retain anything on the stomach, had administered forthwith an enema of castor oil and aromatic syrup of rhubarb, these things being in the house. This operated well, bringing away a large quantity of hard fæces; but the father, (being an aged physician,) thinking the operation insufficient, took advantage of the temporary relief of nausea, at the time the injection was operating, and gave a dose of magnesia and rhubarb. In the course of the night this operated freely, five or six times. But there was no relief of the sick stomach. Urine sufficiently abundant, and high-colored. Warm fomentations were applied to the abdomen; and subsequently a slippery-elm poultice, well mixed with camphor liniment; and after this had been tried with no good effect, a blister-plaster was applied to the epigastrium four hours, until it had drawn slightly, but it did no good. The patient had incessant vomiting of everything taken, the symptoms increasing in urgency. On the afternoon of the third day, three profuse cholera-like dejections suddenly and quickly took place, reducing the system at once to a state of collapse. These discharges were stopped by introducing a suppository of sulphate of morphia, one sixth of a grain; quinine, three grains; and prepared cocoa, sufficient quantity. About three o'clock in the morning of the fourth day, the patient roused a little from the collapsed condition, which, however, was not perfect; sick stomach continued, and when awake, restless; and attributing this apparent increase of power to the suppository, another was introduced. After this the patient appeared to sleep some, but with the eyelids only half closed. She was easily aroused, and always with sick stomach. On taking bits of ice, the water was ejected as often as the quantity seemed great enough for the stomach to contract upon, and everything else immediately after swallowing. After the third day, the morphine and quinine suppositories were used every night,

and throughout the disease, which terminated in death on the sixth day; there was a marked exacerbation every night about one o'clock, when symptoms of sinking were present, and only relieved by the suppository, and injections of chicken soup and rice-water. Excepting the pain and slight tenderness in the right hypogastrium, there was scarcely any other complained of; no tympanitis, no distention. There were incoherency of mind and delirium most of the time during the last four days. The case is remarkable, from its violent and steady progress to a fatal issue.

MONTHLY SUMMARY OF AMERICAN MEDICAL JOURNALISM.

By O. C. GIBBS, M.D., Frewsburg, N. Y.

Quinine as a Parturifacient, &c.—In the *Lancet and Observer* for December, is a paper by Dr. John Lewis, in which quinine, in ten-grain doses, is recommended as a parturifacient.

He says, "The facts above detailed have occurred so often in my practice during the past ten years, that when I find a patient in labor with a rigid os uteri, a tense pulse and dry skin, I always give quinine *freely*, use dry cups over the sacrum, and the warm foot-baths, and expect the os uteri to relax, the pulse and skin to soften, the uterine contractions to increase in frequency and force, as surely and as certainly as I would nausea to follow the exhibition of ipecacuanha, or purging from jalap. I look upon the result as a 'pro hoc'—look for it with as much confidence as I would for convalescence from anæmia or erysipelas, *after* the exhibition of the chalybeates." He says further, "in my experience, it (quinine) proves itself to be a better parturifacient than any of the agents belonging to that class."

Dr. Lewis is not alone in this view, that quinine has a special influence over the uterus. In the published proceedings of the *Union Medical Society*, at Knightstown, Indiana, found in the December issue of the *Lancet and Observer*, we find the following: "Dr. Rawlings reported a labor case, in which there was prolapsus of the funis. Being unable to return it, he hastened the labor by giving *quinine*. The pains increased immediately, the child was rapidly expelled, and was doing well at the present date. The action of quinine on the uterus was discussed at length in this case. Dr. Cooper viewed it as an emmenagogue, and reported some cases where he had used it as such,

with marked effect. Drs. Rawlings, Troy, and Hackleman thereupon reported cases in which they had used quinine for the cure of intermittents, where there was also amenorrhœa; and after using the remedy, the catamenia made its appearance."

Poisoning by Strychnia—Recovery.—In the *Medical and Surgical Reporter*, for December 1st, Dr. J. B. Dunlap reports the case of a young lady that took four grains of strychnia at one dose. In one hour severe tetanic spasms came on, and an hour later she was placed under treatment. She was given "opium and camphor in large doses, and chloroform and ether were freely administered. Under this treatment she recovered." She was kept under the influence of the anæsthetic for about five hours, "the spasms returning during the first three hours whenever the remedy was discontinued."

Delirium Tremens Treated with Digitalis.—In the *American Medical Times*, for December 1st, is the report of two cases of delirium tremens, treated with large doses of digitalis, by the advice of Dr. Stephen Smith. In both cases the delirium was active at the commencement of treatment. Tinct. of digitalis was ordered in two-drachm doses, and to be repeated every three hours until the patient slept. After the administration of the second dose both patients became quiet, and one of them slept; the other slept after the fourth dose. In one case the pulse came down from 108 to 82.

It will be remembered that, some months ago, we recommended veratrum viride in the stage of excitement of delirium tremens. The indications for the use of the digitalis are based upon the same principles. We cannot help thinking the veratrum viride is the safer of the two. Quinine and strychnine we would recommend after the stage of excitement is passed, to give tone to the nervous system. Though we have never used it, we cannot help thinking that from 10 to 15 grains of quinine might be given with benefit, even in the stage of excitement; we should expect it, in connection with veratrum, to produce quiet and free perspiration. We believe that opium has been the death of many patients suffering from delirium tremens.

Pessaries, &c., in Displacements of the Uterus.—Before the *New York Academy of Medicine*, the subject of pessaries, &c., was lately under discussion. Prof. E. R. Peaslee, Drs. J. M. Sims, T. G. Thomas, and A. K. Gardner, took part in the discussion. Prof. Peaslee opened the discussion. In regard to the use of those appliances called "utero-abdominal supporters," in cases of displaced uterus, he says, "They can never either reduce a displaced uterus, or retain it in place if it be reduced. This is no more possible than it

would be to retain any solid body in a definite position in a barrel of water by applying an extra loop on the outside." In regard to pessaries, he entertains a different opinion. Of them he says, "In giving my opinion as to the necessity of this class of instruments, I would no sooner dispense with the use of mechanical appliances in the treatment of all cases of displacements of the uterus, than I would dispense with the use of splints in the treatment of a majority of cases of fracture."

Drs. J. Marion Sims and T. G. Thomas supported the opinions of Prof. Peaslee. Dr. A. K. Gardner opposed in some particulars. In regard to those instruments called "utero-abdominal supporters," he says, "I have seen many cases much relieved by wearing them. I find their use theoretically to be from their holding up the pendulous and weighty abdomen, and the superincumbent viscera which press down the uterus into the cavity of the pelvis; they practically lift off the weight, and allow the uterus to retake its normal position." In regard to pessaries, he says, "I disapprove, *in toto*, of vaginal pessaries; and so thorough is my disapproval, that I have not for some years used them in practice. The reasons for this dissent from generally received opinions are both theoretical and practical. Theoretically, they are wrong; they attempt to cure the effect of disease, and not the disease itself." Practically, he thinks they are often productive of more harm than good.

It is proper to observe here, before concluding this subject, that the opinions of such men as Drs. Peaslee, Sims and Thomas are not to be lightly regarded, especially when supported by the opinions of such names as Hodge, Meigs, &c. We have, however, regarded the pessary as an instrument seldom demanded. In fact, the *American Medical Times*, for December 22d, contains an article upon this subject, from the pen of William Mason Turner, M.D., of Petersburg, Va., that contains opinions so in accordance with our own, that we shall make a few extracts. He says, "My experience bears out, *in toto*, the arguments advanced and positions held by Dr. Gardner." . . . "There are some cases in which the pessary of right construction, of proper size and adaptation to the parts, is of decided and lasting advantage. Only in *one* instance, however, can I conceive this to be possible. In other words, I think the *harm* resulting from the use of the pessary, and the *risk of harm in all cases*, generally overbalance the accruing benefit, save in the case excepted; that case is a *complete* prolapsus, where the ligaments have so far lost their function as to allow the womb to protrude through the genital fissure. Another instance,

perhaps, is where the vagina is perfectly relaxed and affords no support at all to the uterus; but this condition of that canal is almost always present in complete prolapsion. When *this* exists, I think the pessary, *well applied*, is useful." Where a pessary is needed, he prefers the sponge pessary, cut cylindrical, and four inches in length. Our readers will remember that Dr. Bigelow, of Boston, prefers the sponge pessary to that of any other. Dr. Turner gives his treatment thus: "Said treatment can be summed up in a few words; its grand features as regards *all* misplacements, *speaking generally*, are *tonics*, *REST*, *astrigent injections*, including the *sponge*, and a *proper suspensory bandage*. If the womb be anteverted, retroverted, or prolapsed, I reposit it, enjoin and *enforce* strict rest in a horizontal position, exhibit tinct. ferri muriat., keep open primæ viæ, inject into the vagina astrigent lotions, or use (most commonly) the saturated sponge pessary. When the system is toned up generally, and the uterine ligaments, having had a chance to recruit, have somewhat recovered, I make the patient wear a suspensory bandage. I generally use one which any housewife can readily manufacture from any kind of cloth, it matters not what; calico, muslin, &c. It is shaped like an equilateral triangle, two sides of the triangle being curved to fit the abdomen; to the angles tapes are attached."

Diphtheria.—In the *American Medical Times*, for December 8th, Dr. Wm. M. Turner has an article upon the subject of diphtheria, and more particularly its treatment. His views are stated with earnestness, and his treatment given in detail, and in a tone that gives evidence of a supposition of novelty. His views of its pathology are doubtless correct, and his treatment judicious; but the pathology and treatment are such as have been for some time advocated by the first physicians of Europe and this country. But one novelty is mentioned, and that will be alluded to. In regard to its nature, he says, "I think the disease is owing to malarial influence, and that it is essentially a blood-poisoning, with a great degeneracy and breaking down of the vital force." We will not enter into detail in regard to treatment; it is thus briefly stated: "*Tonic and disinfectant*, (the latter internally and topically,) all combined with rich diet. Best tonics, sulph. quinix and tinct. ferri muriat. Best disinfectants, potass. chlor. and acid hydrochlor. dilat. Best local disinfectant, in form of gargle, Labarraque's solution et aqua pura, or any gargle in which, with other ingredients, a disinfectant bears a large proportion." The novelty to which we have referred, and because of which we have referred to this paper, is in regard to local means. He says, "I studiously avoid

probangs; I look upon them as instruments of torture and of death. I *know* I have seen cases which died from the constant mopping to which the throat was subject."

Among the local means employed, the following is well spoken of: "Equal parts of ol. olivæ and spir. terebinth.," . . . "to be applied with a soft rag, and touched very gently." In addition, a flannel rag, saturated with ol. terebinth., is applied to the neck externally.

Glycerine and Camphor as an Antigalactic.—In the *Savannah Journal of Medicine*, for November, Prof. Juriah Harris has an article upon the influence of remedial agents in arresting the secretion of milk in the human female. In regard to belladonna, he says, he has used it often and perseveringly; and as to its power over milk secretion, he says: "In this, I have been invariably disappointed. In no case has it come up to my expectations; indeed, I have never seen any beneficial results from its use." To us this result seems very singular, as we presume we have used it fifty times for the purposes designated, and it has *never disappointed us*. In cases of premature delivery, where the secretion of milk was to be expected, and also where the child was still-born, in cases of mature births, we have commenced, very soon, with the local use of Tilden & Co's fluid extract of belladonna, and a mammary abscess has not occurred to us as the sequel of such cases. When we remember how common such abscesses were wont to be, in such cases, in our practice, anterior to the use of belladonna, we cannot think this different result is altogether accidental.

Prof. Harris prefers, and speaks highly of, a saturated solution of camphor in glycerine. With this he lubricates the surface of the gland, and covers the same with a flannel cloth moistened with the same; the application to be made at least three times a day. He regards it equally efficacious in sore nipples; though, for this purpose, he usually adds four grains of tannin to the ounce of the mixture.

Chloroform in Congestive Chills.—In a former number of our *Summary*, we referred to Dr. Keator's plan of treating congestive chills with the internal administration of small doses of chloroform. In the *Nashville Journal of Medicine and Surgery* for December, Dr. W. E. Arnold, of Kentucky, says that this treatment was first recommended by Dr. Dalton, of Ohio, in 1854, in the *Ohio Medical and Surgical Journal*; and also, that he, Dr. Arnold, as well as Drs. La Rue and Hawthorn, of Franklin, Ky., have used the same treatment with satisfactory results ever since. Dr. Arnold thinks, and in that we agree with him, that the doses of Dr. Keator, five drops, are quite too small. He is

in the habit of using from one to two tea-spoonsful at a time, in mucilage of gum-arabic.

Fatty Degeneration of the Bowels.—In the *Nashville Journal of Medicine and Surgery* for December, Dr. F. S. Evans reports a singular case of fatty degeneration. At a post-mortem, he says, "In making our incisions, we found the parietes of the abdomen enormously thick, say from two and a half to four inches, and degenerated into one confused mass of fat." He says further, "There was not a vestige of the liver to be found; in its stead was a fatty tumor that seemed blended with the walls of the abdomen." The *symptoms* of her last illness are not given.

Emphysema.—In the *New Orleans Medical News and Hospital Gazette*, for December, Prof. Austin Flint has a clinical lecture upon pulmonary emphysema. He regards the disease as connected with, and ordinarily the sequence of, chronic bronchitis, and says, "The great object of treatment is to relieve, and, if possible, to cure the bronchitis, which, as we have seen, stands to the emphysema in the relation of causation." In regard to treatment, he says, "I have found two remedies to possess, in certain cases, a remarkable efficacy. I shall content myself in suggesting these, and, in fact, they are the only remedies of the efficacy of which I can say much from my own experience. One of these remedies, and I am inclined to think the more efficient of the two, is the iodide of potassium." This he would give in from three to five grain doses, three times daily. In some cases the iodide of potassium is inadmissible, and, in such cases, he would prescribe the *chlorate of potash*. "From two to four drachms of the chlorate of potassa may be given during the twenty-four hours."

Dysentery.—There is, probably, no disease in the treatment of which there has been a greater change, in the last few years, than in dysentery. For the last five years we have advocated the use of cathartics in this disease, and others had done so before us, and many have done so since. In the *Boston Medical and Surgical Journal*, for December 6th, Dr. Stephen Tracy has a few remarks upon this point. We quote an illustrative case: "In the year 1838, I had a severe case of acute dysentery in the person of a sailor, on board a merchant ship in the Gulf of Siam. I used opiates freely, and used calomel also, as recommended by Dr. James Johnson. My patient grew worse and worse, and it became certain that he would die under that course of treatment. I then resolved to make use of Dr. Twining's method, as given in his work on Diseases of India. Accordingly, early in the morning, I gave pulv. jalapæ comp., ʒijss. It operated well, produc-

ing copious watery dejections, with great relief of the pain and fever. In the after part of the day, I gave ten grains of Dover's powder every four hours, to be followed the next morning by the pulv. jalapæ comp., in full doses. Under this treatment my patient rapidly recovered."

Silver Sutures.—In the *American Medical Times*, for December 15th, Dr. T. C. Moffatt has the following remarks upon silver sutures: "For three years past I have used nothing else in operations of every kind where sutures have been required. In all amputations, from that of the thigh to the fingers, I have almost invariably employed the silver suture alone. Its advantages are manifold and palpable; indeed, I can heartily subscribe to all that an enthusiastic friend has said of them, so far as my experience will warrant me in saying anything at all. My custom is, in large amputations, to put in so many of them as perfectly to coaptate the flaps, and to leave them in as long as they subserve any useful purpose. They may be allowed to remain for an indefinite period, without the risk of exciting undue inflammation, or even irritation. I have often left them in until after the stump had entirely healed, without occasioning inconvenience of any kind. They always hold the parts in more perfect apposition than silk can do, for the reason that they do not appear to cause any suppuration at all."

As connected with this subject, we would refer to a paper by Dr. John Swinburne in the *Medical and Surgical Reporter* for December 8th. He there recommends as a universal substitute for all forms of sutures, to be applied upon the surface of the body, the common entomology pins. He says, "The introduction of small entomology pins is attended with but little pain in comparison with that produced by the passage of a needle and thread. The points are so carefully prepared and the instrument so perfect that patients declare the pain to be much less than that accompanying the drawing through of the thread, even after the needle has perforated the skin. By the use of these, the edges of a wound can be approximated in the nicest possible manner by means of the thread as used in ordinary hare-lip operations, so that union by the first intention is more sure to follow than in any case of simple interrupted or even quilled sutures. This pin, from its tenderness and pliancy, will bend and accommodate itself to the parts, thus doing away with the chief objection to the use of the stiff, common pin." He says further, "I have used the silver wire a long time, and believe that the encomia passed upon it are deserved; but that it is, on the whole, unequal in value to, and not so worthy of employment, as the pin, will be evident from a tabular comparison:

Silver Wire.

1. Expensive and difficult to obtain.
2. Pain and difficulty in introducing.
3. Danger of tearing soft and tender skin in the process of twisting.
4. The interstices between the sutures have to be supplied by adhesive plaster, &c.

Pin Suture.

1. Cheap; 75 cents per thousand.
2. Less painful, and easily introduced.
3. The most delicate skin is in no danger of being lacerated.
4. The edges of the wound are completely covered by the thread through its whole extent."

Entomology pins were, perhaps, first used by Prof. Alden March, of Albany, (see *Transactions of the Medical Society of the State of New York*, for 1855.) Prof. March, however, only used them as hare-lip pins. This priority of use by no means detracts from the honor due to Dr. Swinburne, who recommends them as universal sutures.

Varicose Veins of the Leg.—The treatment of this troublesome affection is a matter of interest, and more particularly so because surgeons of equal eminence differ in regard to it. We quote a few opinions that have fallen under our observation during the last month. In the *American Medical Times*, for December 1st, Prof. A. C. Post makes the following remark: "The treatment of varicose veins is palliative or radical. The radical treatment consists in obliteration of the diseased vessels, and the process *is always attended with more or less danger to life*; it should therefore be reserved for aggravated cases. The palliative treatment consists in giving a uniform support to the limb by means of bandages, or of elastic laced stockings." We have previously referred to the radical treatment of varicose veins by subcutaneous application of the metallic ligature, as practiced by Dr. R. J. Levis. In a private letter to us, Dr. Levis says his method of cure "*is always efficient, and is absolutely safe.*" In the *American Medical Times*, for December 15th, Dr. T. C. Moffatt has a few remarks upon the treatment of this affection by injection into the diseased vein. We quote one case in illustration. The case referred to was an unusually bad one. Dr. Moffatt says: "Placing a tourniquet upon this (the most prominently enlarged vein) above, and making pressure below, so as to isolate about two inches of the vein, I threw into it eight drops of the persulphuret of iron diluted with as much water.—(Squibb.) The instrument used was the syringe com

monly employed for injecting morphia into the cellular tissue. After a few minutes the pressure was removed, and a hard plug remained; the blood coagulated almost instantly. The inflammation which followed was not immoderate. Cooling anodyne lotions were applied, and subsequently lead poultices. A very slight amount of suppuration resulted, and the wound healed up kindly. The ulcer closed rapidly, and in just three weeks the limb was perfectly cured."

Bearing upon this point, Prof. E. S. Cooper, in the October number of the *San Francisco Medical Press*, has a few remarks. He has not much confidence in the treatment by injections of Monsel's salt. That the injection will produce an immediate clot, he does not doubt; but this clot will arrest the undecarbonized blood in its way back to the heart, and this arrested blood will become a great source of irritation. He says, "After trying the various methods of treating varicose veins of the lower extremities, we are convinced that there is none like that of free incisions, followed by keeping the wound open until granulations begin to fill up the incision, in the mean time keeping a roller as tightly upon the limb as the patient can conveniently bear, commencing its application at the foot. By this means, blood is prevented from entering the veins to any considerable extent."

Besides the objections to the injections above stated, he says, "We do not believe that even a very small quantity of Monsel's salt can be introduced into a blood-vessel, without risk of fatal consequences."

Morbus Coxarius—A New Apparatus for its Treatment.—In the *Chicago Medical Examiner*, for December, Prof. E. Andrews has a clinical lecture upon *hip disease*. Raising some objections to the splints of both Davis and Sayres, he has invented a new apparatus, which is thus described: "It consists of a rod of iron, to be applied to the *inner side* of the leg and thigh, with a foot-piece, which is riveted to the sole of the shoe. To the upper end is attached a sliding rod and screw for extension, surmounted by a crutch-top well padded, which rests against the perineum. In adjusting it, the foot is placed in the shoe and held there by long and broad adhesive straps, attached to either side of the leg, and brought down and tied or sewed under the foot-piece. The screw is then turned up until the padded crutch-top rests firmly against the perineum, and the desired extension is accomplished. In this way the weight of the patient rests upon the instrument, and the instrument upon the ground, without impairing the extension. The superior extremity not reaching above the joint, the patient readily flexes the thigh when sitting, and the instrument being on the inner side of the limb, is out of the way of foul discharges after

the operation of excision." He concludes his paper by saying: "By the measures which I have explained to you, it will yield to your skill, and you will find yourselves able hereafter to save many a life such as your predecessors have been wont to lose."

Gelsemin in Spermatorrhœa.—In the *American Journal of Indigenous Materia Medica*, for November, there is an article upon the subject of gelsemin, in which the following remark is made in regard to its use in spermatorrhœa: "We believe it to be, in the treatment of spermatorrhœa, as near a specific as any medicine can be. Administer the following powder each night on retiring:

R.—Gelsemin,	. . . . .	gr. ss.
Lupulin,	. . . . .	grs. ij.—M.

Gradually diminish the dose as the patient shows signs of improvement. We have cured several severe cases with from six to ten doses."

Cerasin in Fever and Ague.—In the journal just quoted from, Dr. Keith has a short article on the above subject. He says, "Cerasin is the name given to the combined active principles of the bark of the *Cerasus Virginiana*, commonly called choke-cherry. This article is unsurpassed in the treatment of ague and fever." He would give it during the intermission, in doses of six or eight grains—doses every three or four hours.

Dysentery.—In a former number of the *Summary*, we gave a synopsis of a paper by Prof. E. S. Cooper, of San Francisco. We gave Dr. Cooper's treatment, but objected to the consideration of diarrhœa and dysentery as allied diseases, requiring similar or identical treatment. In the October number of the *San Francisco Medical Press*, Prof. Cooper remarks upon our remarks, and says: "Dr. Gibbs says, 'cathartics of a certain character are always appropriate in a pure case of dysentery,' which we are not willing, by any means, to admit. Take, for instance, a case in which there is tormina and tenesmus; a dry and hot skin; tongue parched and dry; the edges and tip red, glossy and smooth, while the centre is yellowish and furred; with a tense pulse and great thirst. This is what Dr. Gibbs would doubtless denominate a 'pure case' of acute dysentery, but which we should not attempt to cure by cathartics; but would commence by emetics, to be followed up by minute doses of ipecac and opium—one-half grain of the former, to one-eighth grain of the latter, combined with calomel, in corresponding small doses, to be followed by an enema at the end of fifteen or twenty hours, thus making ipecac the principal agent in the case."

We would say to Prof. Cooper that once we would have done the same, and our case would, if it did not die, have continued for three weeks, and recovered slowly with an irritable condition of the bowels, easily disturbed by the slightest exposure to sudden changes of the weather, or to indiscretion in diet.

Such a condition as Prof. Cooper describes is admirably adapted to the "cathartics of a certain character" which we alluded to. Now, we would give such a case a table-spoonful of saturated solution of epsom salts, with from twenty to thirty drops of elixir vitriol every four to six hours, until feculent discharges are obtained. If tormina and tenesmus were great, we should give morphine in doses sufficient to control these symptoms. After this we should depend upon smaller, or less frequent, doses of this "peculiar cathartic" and opium, and tonics if needed. Under this treatment, we should expect the tormina and tenesmus to disappear in twelve hours, the skin to become cool and moist, the tongue to become moist and coated with a slight white fur for a day or two, and then to clean, leaving a healthy surface, and the patient to be in a condition to discharge in four or five days from the commencement of such treatment. To Prof. Cooper, as well as to others, we would say, try it before you condemn it.

Vaccination.—In the *San Francisco Medical Press* for October, Dr. Wm. A. Grover has an article upon vaccination. He instances three cases vaccinated from a scab selected by the friends of two of the persons vaccinated, because of the supposed healthfulness of the subject from whom it was taken. In all the cases the symptoms were violent; and among the symptoms he says, "wherever the cuticle became broken, there would arise large superficial sores, and some of them, of a phlegmonous character, not unlike large carbuncles." In neither case was there a good scar left, and he thinks the vaccination will not prove protective against small-pox. Dr. Grover says that he subsequently learned that the pustule was frequently broken and rubbed off; and that the scab used was of subsequent formation, and probably consisted of the products of the inflammation which followed. He thinks the scab was not genuine vaccine lymph, but dried pus. He gives it as his opinion that the unfortunate cases that occurred at Westford, Mass., were probably the result of the same cause. He considers it of the first importance that the pustule furnishing scabs for vaccination should remain from the first unbroken.

The paper alluded to above was read before the *San Francisco County Medico-Chirurgical Society*, and in the discussion which followed, Dr. Rowell said, "he was confident he had been instrumental

in propagating scarlatina in at least some three children, whom he vaccinated from a scab which he obtained from an apparently healthy child, but which, two days after removing the scab, was attacked with scarlatina, and that the children vaccinated with that scab all had scarlatina soon after the vaccination."

Chronic Dysentery.—Before the *San Francisco County Medico-Chirurgical Society*, as per report in the *Medical Press*, Dr. Cole reported a case of chronic dysentery "which had resisted all ordinary treatment adopted by other medical men." The case was of eight months' standing, and on examination of the passages, quantities of pus and blood were observed. The patient was relieved by an injection of the persulphate of iron, or Monsel's salt, in the proportion of three grains to the ounce; and after the third injection, was entirely cured.

Aneurism—a New Cure of.—In the *San Francisco Medical Press*, for October, Prof. E. S. Cooper gives a new method of treating aneurismal tumors, with an illustrative case. "Exposing as much of the tumor as could be done conveniently, and afterwards, by means of long curved needles, passing ligatures through, as deeply as was practicable, in different directions, and then tying very tightly the ends of the ligatures. The ends of each ligature being tied together before another was introduced, the tumor was gradually reduced to less than one-third of its original size; in fact, after the introduction of eight or ten ligatures in this way, one could hardly discover anything, except a small, hard bunch of knots, formed by the several ligatures, near the centre of the tumor." Lint and roller are next applied, the latter from the extremity of the limb, and tightly. Evaporating lotions are applied for four or five days, and then poultices substituted. In a few days sloughing commences, and, in the case reported, in two weeks not a vestige of the tumor remained. The wound then healed by granulations.

Pressure, as Preventive of Inflammation.—In the journal above referred to, Prof. E. S. Cooper has an article upon the above subject. We make but one quotation: "Such is our confidence in the efficacy of pressure in preventing inflammation after injuries, that there are many operations we are constantly performing successfully, that would not be attempted at all, were it not that we can anticipate and prevent inflammation by pressure, applied by means of rollers. Its reliability and efficacy render it invaluable."

Enuresis.—In the *Boston Med. and Surg. Journal*, for December 20th, 27th, and January 3d, Dr. D. D. Slade has an article upon a

morbid condition of the neck of the bladder, not described by surgical authorities, in which some remarks are made upon enuresis. Of its pathology, he says: "It certainly does not seem irrational to attribute the majority of these cases to some local cause, which local cause we find in the contraction of the muscular fibres at the neck of the bladder." Of treatment: "In our own practice, we have met with signal success in the treatment of enuresis in children, by the use of belladonna; and lately we have the results of a series of carefully conducted observations upon this affection, by Dr. Hewson, of New York, which are at once conclusive and satisfactory. "Dr. Hewson's observations embraced 63 cases, and he regarded belladonna as almost a specific."

Chloroform.—Of late, because of the frequent accidents, chloroform has been growing into disfavor. Ether, for a time past, has been gaining that favor which it had lost. The choice of anæsthetics has been governed somewhat by fashion—thus, in Boston, ether is almost exclusively used; in other localities, a combination of ether and chloroform; in still other, chloroform exclusively. In the *Med. and Surg. Reporter*, for December 22d, Prof. Gross' clinical remarks upon chloroform are quoted. He "has used chloroform for more than ten years, without ever having seen any accident resulting from it. He prefers it to ether, as the anæsthetic influence is more rapidly produced, and more easily maintained by it; as it causes less bronchial irritation, and is less liable to produce vomiting, or other unpleasant effects. In order to use chloroform with impunity, it is indispensable to observe the following rules: 1. The patient's stomach should be empty. 2. The patient should be kept in the recumbent position. 3. There should be no constriction of the chest and abdomen from clothes. 4. An abundance of fresh air should be allowed to admix with the chloroform. 5. The inhalation should be effected gradually. And 6. Care should be taken that the article used is perfectly pure."

We have supposed the sources of danger from chloroform were *impurity* and too *rapid administration*, mainly. Ether, in our judgment, never can wholly supersede it. In puerperal convulsions, ether cannot be used as a substitute for chloroform. In hysterical convulsions, the same may be said. A few days since, we were called to see a case of violent hysterical convulsions—about to administer chloroform, the friends objected. In a similar attack, not many days previously, another physician was called, and they said he gave her a two-ounce vialful of chloroform by inhalation, with the effect of making her much worse. From the effect and the amount, we suppose ether had been

given, and so stated. We gave less than a tea-spoonful, with the effect of relieving the paroxysm in less than five minutes, and under sedatives and antispasmodics, they did not return.

Blood-letting in Inflammation—The Tendencies of the Age considered.
—During the past year, we have endeavored to give a synopsis of the professional mind upon this subject. We regard it as one of the first importance in the treatment of disease. Recently, before the *Philadelphia County Medical Society*, the subject has been up for discussion, and we can assure our readers that the doctrines of Bennet, Todd, and John Brown, did not receive any marked encomiums. Prof. S. D. Gross led off, in a paper upon the tendencies of the present day, in regard to the treatment of disease by stimulants. An idea may be had from one quotation. We quote from the *Reporter*, for December 15th and 22d. "The inquiries of the present paper will be two: First—Has there really been any change in the type of disease? and Secondly—Are the people of the present day less capable of resisting active depletion? The endeavor will be to show that both of these views are untenable; that they originate in misconception and superficial observation." Our readers are aware that Prof. Gross is an advocate of the inflammatory character of most diseases, and from the above it will be seen that he is no advocate of change of type of disease, or of the diminished powers of the system to bear depletion. Among the causes which have led to a change of treatment, he instances the following: "The use of quinia and morphia is now much better understood than formerly, and the antiphlogistic virtues of aconite and veratrum viride were entirely unknown until a very recent period. Quinia has become the great remedy in malarial affections; opium is a powerful adjuvant in allaying pain and procuring rest, both to the part and the system; and aconite and veratrum viride exercise so astonishing an influence in controlling arterial action, as to render them special favorites with every enlightened practitioner. They have, in fact, taken the place of the lancet, tartar-emetic, &c. Thus we readily see why blood-letting has fallen into desuetude, unmerited certainly; for, spite of all, an early spoliative venesection, and the judicious use of the more heroic articles of the materia medica, would often do more in saving structure and function, than any of the present popular remedies." We should have observed above, that Prof. Gross said that, in a practice of over thirty years, he had seen no reason to think that disease had changed its type. "Diseases seem the same now as when he entered upon the practice of medicine."

In the discussion of the subject which followed the reading of Dr.

Gross' paper, Dr. D. Francis Condie took an active part. Though an advocate of blood-letting under certain circumstances, he believed that diseases during the last fifty years had undergone a material change. "Extensive forests have been felled; water-courses have been reduced in size or entirely drained; vast extents of marsh have been reclaimed; the surface of the earth, to a far greater extent than it had previously, has been brought under cultivation; the production of all the necessities of life has been augmented, and at a diminished cost, bringing them thus within the reach of classes by whom formerly they were unattainable; machinery is taking the place of manual labor to a very great extent, at the same time; the masses have been subjected to entirely new influences, domestic, social, educational, and political; minds which, in former times, were allowed to remain dormant, have been called into activity, and engaged upon subjects beyond all others the most exciting and engrossing. In short, almost everything, physical, moral, and intellectual, with which the human being is surrounded, and by which his vital organism is capable of being influenced for good or for evil, has undergone a most important change. The *character and forms* of his disease have, *most unquestionably*, undergone a change." Omitting much, we pass to a practical remark. Dr. Condie says, "To whatever cause it may be attributed, it is very certain that diseases, even those most decidedly inflammatory, *will not bear* the same amount of direct depletion as formerly. In evidence of this fact, we have the concurrent testimony of the majority of medical men everywhere." Notwithstanding the above expressed opinions, Dr. Condie is "certain that blood-letting has been far too much neglected of late years." Though an advocate for a judicious antiphlogistic treatment, Dr. Condie differed from Prof. Gross in believing that blood-letting was not as much demanded as formerly.

Dr. Darrach made extended remarks upon the subject, entering into the history of the therapeutic changes in the last half century. While he advocated blood-letting under certain circumstances, he was not disposed to reject alcoholic stimulants. These latter he regarded almost as a specific in some forms of typhus. Thus, he says, "There is a specific disease—typhus—produced by a peculiar miasm, propagated by a contagion, which results from concentration of cases, and in which alcoholic stimulants are as specific as cinchona in endemics." At the same time, he believes that many cases of typhus are aggravated by alcohol.

Dr. Henry Hartshorne followed Dr. Darrach, and showed from statistics that the treatment of Dr. Todd did not give results equal to

that of other physicians who pursue the ordinary antiphlogistic treatment. The mortality of the London Fever Hospital was about 15 per cent. The per cent. of mortality under Dr. Todd's treatment was about 18 per cent.!

This is a subject of the first importance, and we take great pleasure in giving our readers the benefit of the opinions of the most authoritative in our profession. Our opinions differ a little from that of any here given. We believe, 1st, That in all anterior time, patients have been bled more than was necessary. 2d, We believe that diseases require less antiphlogistic and more stimulant treatment than formerly. 3d, We believe there are cases now that require the lancet for their judicious treatment, as well as in former times. 4th, Pneumonia and puerperal fever are among the diseases that we think have been treated too actively; a more expectant plan than was in vogue fifty years ago, we think will give better results than the records of that day will show.

Puerperal Fever.—Akin to the above subject of blood-letting in inflammation, we regard a clinical lecture by Prof. Barker, physician to Bellevue Hospital. We quote from the *Medical and Surgical Reporter* for December 22d. "One of the most influential and brilliant obstetricians in the country, Dr. Meigs, of Philadelphia, has published a work on 'Child-bed Fever,' which has done a great deal of harm. Dr. Meigs believed the disease to be always and essentially inflammatory; that it was not contagious, not communicable from physician or nurse to the patient, and that the true treatment was that calculated for the subdual of inflammations generally. This is a doctrine fundamentally false."

Prof. Barker thus sums up his treatment: "1st, *Veratrum viride* should be employed to control vascular action. 2d, *Opium* should be exhibited in quantities as large as could be borne. 3d, The system should be supported by free stimulation, especially in the latter stages. This, though placed last in order, was probably, all things considered, the most important indication of all." In cases of anticipated epidemic of the disease, Prof. Barker is in the habit of giving quinine as a prophylactic.

Alcohol as a Remedial Agent.—This subject came before the *Medical Society of the County of Albany*. Stimulants received more favorable mention than before the *Philadelphia County Medical Society*. Dr. J. E. Pomfret led off in an essay upon the subject, regarding alcoholic stimulants as capable of fulfilling many indications in the treatment of disease. In the delirium attending prostration, he regarded it almost

a specific. In the discussion of the subject, Dr. Vanderpool said: "In the treatment of typhoid fever he had discarded almost every medicine. He could control the delirium and induce sleep by the use of brandy, and which he could do with no other remedy." In the prostration which follows the subsidence of the fever in scarlatina and measles, he considers it of great value. "The propriety of its use in diphtheria none will question." . . . "In the treatment of phthisis, it is not only the fashionable, but almost the only available remedy."

Dr. Swinburne remarked that, in 1851, he treated over eight hundred cases of ship fever in the Alms-House Hospital, with a mortality of ten per cent. less than was obtained in the other New York hospitals, where less reliance was placed upon alcoholic stimulants. "He was accustomed to treat pneumonia with this remedy, and had been for years." Thus, our readers will see that doctors will differ; the first names in the profession, in one locality, will regard blood-letting and antimony indispensable to the safe and promptly successful treatment of pneumonia; and in another locality, names equally worthy of respect will tell us that blood-letting, antimony, and calomel should be abandoned in pneumonia, and quinine and brandy substituted, would we arrive at the lowest possible rates of mortality.

Trillium as a Remedy in Menorrhagia.—In the *Journal of Materia Medica* for December, Dr. E. G. Wheeler has an article upon this subject. He reports three cases in which the trillium was depended upon alone, in which the results were quite satisfactory. He made a strong infusion of the root, and gave two table-spoonsful every ten minutes. As soon as the menorrhagia materially lessened, he diminished the dose or the frequency of administration.

MONTHLY SUMMARY OF FOREIGN MEDICAL LITERATURE.

By DR. L. ELSBERG.

11. *Organic Diseases of the Pancreas.* By Dr. J. KLOB. (Oesterreich. Zeitschrift für Prakt. Heilkunde, VI., 33, 1860.)
12. *The Significance of Spinal Pain in Diseases of other Organs.* By Dr. A. MAYER, of Mayence. (Archiv. der Heilkunde, I., 4, 1860, p. 349.)
13. *Chancre Produced by Transmission of Secondary Syphilis.* By Dr. LANGLEBERT. (Gazette des Hôpitaux, 94, 1860.)
14. *The Sphygmograph.* By Dr. MAREY. (Lancet. Dublin Medical Press, Jan. 2, 1861.)

15. *Death of an Infant by Sucking Lucifer Matches.* (Ibid.)
16. *On Jugular Venesection in Asphyxia.* By Dr. JOHN STRUTHER. (Beale's Archives of Medicine, No. VI., 1860, p. 143.)
17. *On the Radical Cure of Varicocele by Subcutaneous Incision.* By HENRY LEE, F.R.C.S. (Ibid, p. 139.)
18. *On a Simple and Accurate Method of Recording Physical Signs.* By LIONEL BEALE, M.B. (Ibid, p. 97.)
19. *A Clinical Report on True Ringworm.* By JONATHAN HUTCHINSON. (Medical Times and Gazette, January 12, 1861.)

11. For many years Dr. Klob has directed special attention in dissections to the pancreas. Hé confirms the assertion, that independent disease of this organ is very rare. Secondly, its texture is frequently affected in cardiac and hepatic diseases, accompanied by venous stagnation. As in diseases of the heart, stagnation of the blood in the liver produces there a chronic inflammatory condition, with increase of connective tissue, and afterwards retraction, ("granulated liver,") so also does stagnation of the blood in the pancreas follow stagnation of the portal circulation, producing likewise an increase of the interstitial connective tissue. *At first*, the pancreas appears enlarged, moist; the connective tissue covering the gland is œdematous; an incision reveals the pale, whitish-yellow gland substance proper, surrounded by swollen, more or less reddened, seams of connective tissue. Under the microscope is seen in the interstitial tissue a development of newly-formed connective tissue, with considerable nucleolar increase in the old. The cells of the acini are deficient in fat-globules; otherwise normal. In *more advanced* stages, the volume of the gland is diminished, and its consistence increased. Its color becomes more uniform, an incision showing no difference in color between the proper glandular substance and the interstitial tissue, but the retraction of the latter renders the granulated appearance of the gland more perceptible. Imbedded in this tense connective tissue there are occasional small spots, from which an emulsion-like mass can be pressed out, appearing under the microscope as molecular lime, glandular cells, or bundles probably of margarinic crystals, the product of atrophied adipose tissue.

The affection described Dr. K. has found to extend over the whole gland, or to be confined to particular parts, (especially the caput pancreatis.) In individual parts so affected, the cysts probably originate, which are occasionally met with in the pancreas. This condition of things and retraction is of importance, especially when occurring in the caput pancreatis, as it gives rise to the duct. choled., together with the divertic. vateri being pulled so much to the left, that stagnation of the bile, icterus, and finally cholæmia may be produced.

Dr. K. also discusses the not infrequent interstitial hæmorrhage of the pancreas, which is ascribed to so-called mechanical hyperæmia. Hypertrophy of the pancreas has never been observed, even in all cases of increase of its volume, by increase of connective tissue; the gland substance proper becomes atrophied.

12. Many diseases cause pain in the back, not by organically affecting the spinal nerves, but by irradiation, *i. e.*, by transmission of irritation exerted somewhere else upon neighboring nerves of sensation. This irradiated pain is characterized by its being *spontaneously very vivid, but generally diminished by pressure*; that is, by strong pressure, while gentle pressure is said to increase it. [We must interpolate here, that this last point is doubtful. Dr. BARWINKEL has observed, "Excentrically projected pain cannot be modified by the mere touch, and can be differently impressed by a different amount of pressure if at all, only inasmuch as the stronger pressure must have the stronger effect, since the irritation from the pressure can only be regarded as an addition to the irritation already existing in the centre."] The pain is seated in the skin, and frequently changes its position. Different individuals are predisposed to it differently. Treatment directly against it is ineffectual, and may prove injurious.

Of the affections accompanied by the irradiated pain, Dr. Mayer mentions, first, *peripheral traumæ*. *Abdominal diseases*, especially *diseases of the sexual organs of females*, are next discussed; the pain in menstrual disturbances and parturition is partly due to congestion, and excluded, but *organic diseases of the uterus*; and also, *changes in the position of the uterus* are among the most influential causes of this pain. They induce pain along the inner side of the thigh, iliac regions, small of the back, and between the shoulders. SNOW BECK's statements as to the different seat of the pain in disease of different parts of the sexual organs are not confirmed. Erosions on the cervix are particularly signalized. From the *ovaries*, pain in the back is often caused. From the bladder, but seldom. In cases of incarcerated renal calculi, the pain irradiates more to the bowels.

Far more seldom than from the urogenital organs, does the irradiation proceed from the *digestive organs*, except when the stomach is diseased. But even in the latter case, the pain in the back is not constant, and often changes its place. Dr. M. calls attention to the fact, however, that the pain in the back doubles the patient more than that in the stomach.

The pain in the shoulder, in *disease of the liver*, is mostly irradiated, as is also the pain in the back sometimes present. Diseases of the

pancreas, peritoneum and mesentery do not cause it, but those of the *lungs and pleura* do, even at a distance from these organs. Organic *cardiac affections* induce, besides the pain in the left arm, sometimes also pain in the back.

In the conditions thus far indicated, the pain in the back is symptomatic and secondary. But there are others in which it either depends upon the same cause as the morbid condition, or is present accidentally. In these cases it may be superficial or deep seated in any part of the back. In this category, *intermittent fever* is first mentioned. Spinal pain was present only in 36 out of 400 cases; sometimes lasted longer than the fever, or ceased before the returns of the paroxysms had been prevented, and was found to be in no causal connection with intermittent fever, nor with the individual paroxysms.

Similar remarks are made about the spinal pain in *typhus*, which was present 28 times in 220 cases. The spinal pain in the prodromic stage of *variola* depends on congestion. In *dysentery* it is absent, but exists generally in *influenza*. In *poisoning* it may be caused by affection of the spinal cord; and in *chlorosis* and *anæmia*, it depends on the morbid condition of the blood. The spinal pain so frequently observed in *hysteria* is generally due to the exalted irritability of the whole nervous system, and the latter to faulty nutrition.

13. Langlebert claims to have been the first who laid down the proposition (in the year 1856) that constitutional syphilis always proceeded from a chancre, and a so-called indurated chancre, even in case the infection was produced from secondary syphilitic forms. He goes on to say that this proposition has been confirmed not only by his own further observations, but also by those of others. He mentions *Rollet* (Arch. génér. Févr., Mars et Avril, 1859,) and *Guyenot*, (Inaugural Dissertation, Paris, 1859,) the latter of whom draws the following conclusions: 1, The result of inoculation of secondary syphilis upon a healthy individual, is a chancre. 2, The chancre produced by inoculation of constitutional syphilis is always of the same form, whether the virus be taken from ecthyma-pustules, acne-pustules, squamous papulæ or any syphilitic tubercule, or whether the blood itself is inoculated. Langlebert also states, that more recently *Diday* of Lyons, and *Clerc* and *Gabalda* of Paris, have embraced the same opinion, and that finally *Ricord* himself inclines to the same view. While clinical observation and experiment thus confirm the proposition, logic is also in its favor, L. says. For if secondary syphilitic forms of disease are at all contagious, it must be because there is present syphilitic virus; but this virus, whenever it comes, must be always the

same. Transmitted into a healthy system, it must consequently produce the whole series of phenomena peculiar to syphilis, beginning with chancre, which is always the primary, or first symptom of syphilis. If this view had sooner been known, L. thinks that the long-contested question of the contagiousness or non-contagiousness of secondary syphilis would have been settled at once; for the main argument of the non-contagionists was the constant origin of syphilis from a chancre. It has never been observed, said they, that syphilis has commenced with ecthyma or any other secondary symptoms; therefore, these secondary forms are not contagious. This argument (which we have imperfectly, but we trust sufficiently intelligibly expressed, L. E.) could not be refuted by the contagionists, because they were ignorant of the law of transmission of the secondary forms.

14. Dr. Marey has laid before the French Academy of Sciences an instrument of his invention, destined to reproduce on paper the alternating movements of ascent and descent, together with their exact relative extent, of the pulse. The sphygmograph, as it is termed, is composed of a lever, one end of which rests on the pulsating artery, the other being in connection with a sort of pen, which scores down a zigzag line, varying according to the impressions communicated to the lever. The strip of paper on which the drawing is made is, by means of a clock-work movement attached to the apparatus, made to travel under the pen at a uniform speed, much as does the dispatch band in the French electric telegraph system. The line traced on the paper of the sphygmograph by the healthy artery generally consists of a perpendicular up-stroke, and an oblique down-stroke, the latter twice the length of the former. That traced by the impulse of a radial artery, the brachial of the same side being affected with aneurism, is very different, and is a mere undulating line.

15. A child, æt. 16 months, in the absence of its mother, was found sucking lucifer matches, which had been given him by a little companion. Shortly after, the mother fetched it down stairs, and was in the act of suckling it, when it suddenly began to vomit. Spite of immediate medical exertions, the child never rallied, and died early the following morning.

16. Dr. Struther recommends, that in case of asphyxia from drowning, the jugular vein should be opened about an inch above the clavicle, as early as possible, and that as soon as the active flow of blood ceases, the wound should be closed, and artificial respiration commenced. Blood regurgitates through the valve from the overdistended auricle. If the blood does not flow with moderate freedom, Dr. S. thinks

it may be desirable to introduce a probe, or blow-pipe, or instrument like a female catheter, and pass it in gently for the distance of a couple of inches.

17. Mr. Lee, before dividing the vein for the cure of varicocele, places a needle under the vessel, both above and below the part to be divided. Ligatures are then passed round the ends of the needles, and over the vein. These are allowed to remain for a couple of days, when the blood in the vein will be coagulated. The vein is next divided by subcutaneous incision, and two days afterwards the needles are removed. Cases are subjoined illustrating the success of this plan of treatment.

18. It is recommended to record the physical signs by different varieties of pencil shading, or by colored chalk, in blank outlines of the chest, which outlines the author furnishes on application, at the cost of two shillings English, for 50 copies. [The plan doubtless possesses its advantages, and we may refer to it again.]

19. (1.) True ringworm, or *tinea tonsurans*, may be defined as a disease affecting either the scalp or the general surface, in which circular patches are formed, on which the hairs break off short, and a slight, branny desquamation is seen, both hairs and epidermic scales exhibiting under the microscope the sporules and thalli of a fungus.

(2.) Ringworm in the scalp is rarely seen, excepting in children; but on the general surface is not very unfrequent in young adults.

(3.) It is contagious, and spreads by contagion only.

(4.) It is not attended by any peculiar form of dyscrasia, but on the contrary, often attacks children in perfect health.

(5.) It is much more easily curable on the general surface than on the scalp, owing to the circumstance, that in the latter situation the fungus has obtained access to the follicles of the hairs.

(6.) Being a purely local disease, ringworm does not require, *per se*, any constitutional treatment.

(7.) A purely local treatment, if efficiently pursued, is always, and rapidly, successful.

(8.) Epilation, and the use of one or other of the known parasiticides, are the measures of treatment required.

(9.) There is no real difference between ringworm on the scalp and ringworm on the general surface.

(10.) Ringworm, although not unfrequently causing minute vesicles, has no true analogy with herpes.

REVIEWS AND BIBLIOGRAPHY.

On Diseases peculiar to Women, including Displacements of the Uterus.

By HUGH L. HODGE, M.D., Professor of Obstetrics and Diseases of Women and Children, in the University of Pennsylvania, pp. 469, octavo. With original illustrations: Blanchard & Lea.

Prof. Hodge's work has been expected with much interest by the profession at large; and we propose to give a somewhat thorough analysis of it; proceeding as it does from one who has devoted so many years to the affections above mentioned, and who has acquired a very high reputation for skill in their treatment.

The author dedicates his work to the alumni of the University of Pennsylvania, and states in his preface that it "presents the results of his observations and reflections on the diseases peculiar to women." And having prefixed a short and appropriate letter to Dr. C. D. Meigs in acknowledgment of a similar compliment paid to himself by Dr. M. in his work on "Woman, her Diseases, and Remedies," Dr. Hodge divides the diseases peculiar to women, except the displacements of the uterus, into two great constitutional classes; those arising from irritation and those from sedation. The three parts of the work are therefore as follows:

Part 1st.—Treats of diseases of irritation.

" 2d.— " " displacements of the uterus.

" 3d.— " " diseases of sedation.

I. The first part, diseases of irritation, is divided into 12 chapters.

1. Chapter first treats of nervous irritation and its consequences. There is so much looseness of expression in medical works in regard to these topics, that the author gives, as fundamental to his views of the pathology and treatment of certain of these conditions, his definitions of irritability, irritation, excitability and excitation. From irritation ensue two kinds of congestion, the passive and the active; the former being confined especially to the veins, and the latter being generally arterial. Active congestion may be due (1) to irritation of the organic nerves of the part, when it is termed by Dr. H. inflammatory congestion; or (2) to an irritation of the cerebro-spinal nerves, as in blushing, in the erection of the sexual organs, nipples, &c., &c., and which Dr. Hodge calls simple congestion.

Effusion results equally from passive congestion, from the inflammatory, and from the simple, if severe or long continued. Hypertrophy is also a frequent result of chronic simple (nervous) congestion. Inflammation is never caused by simple congestion in the author's opinion,

(pp. 30 and 33,) though it may be a complication. The cause of simple congestion being irritation of cerebro-spinal nerves, the treatment should generally be directed to the latter; as in the congestion of the brain from dentition, &c. Simple congestion is due to irritation of the cerebro-spinal nervous system, of the organs of *animal* life. Neuralgia is a variety of nervous irritation. But as all nervous irritation is not painful, all possible unpleasant feelings may result from it, (p. 37.) Again, organic irritation is not necessarily associated with pain. Hence pain in inflammation is an accident, (p. 34.) Irritation of a motor nerve is manifested by *spasm*. But all the above abnormal sensations are as real as the spasms; are not due to a bad disposition, or to a morbid imagination, as some declare.

Nervous irritation must not be confounded with vital power or strength. There is often much irritation, with but little power. The latter implies not only the capacity to act, but to resist and endure. Debility is a diminution of strength or power. Nor must action be confounded with power; it also being the result of irritation, and at the same time the manifestation of power. The irritability (excitability) of a part is inversely as its strength.

Women are far more liable to cerebro-spinal nervous irritation than men, and hence to simple congestion and all its consequences, sensory and motor; while inflammation is less common in them.

Anæmia is not associated with nervous irritation (or nervousness) as cause and effect, or effect and cause, though they frequently co-exist.

The hysterical or neurotic diseases of woman are therefore states of irritation of the cerebro-spinal nervous system in whole or in part, (p. 45.) These irritations may, however, and often do, arise from any local irritation. But irritation of the uterus is the most fruitful source of these diseases in women, and this, with its consequences and treatment, occupies the remaining 11 chapters of the first part of the work.

The foregoing abstract gives the basis of the author's pathology of uterine diseases, and, since "*propter uterum mulier est*,"* of all the diseases peculiar to women. We think it would be more easily understood, if the word inflammation were substituted for "*inflammatory congestion*," and if it had been at first more clearly stated that by organic irritation is meant irritation of the organic nerves. We must, however, suppose that this preliminary chapter was written some years since, and has not been subsequently revised. It will hardly be deem-

* The whole quotation from the original is "*propter uterum solum mulier est quod est*."

ed possible at the present time, so to discriminate between an irritation of the cerebro-spinal, and of the organic nerves, as to justify the assertion, that the former never passes into or produces inflammation, while the latter does. The present state of histology warrants the idea that all the cerebro-spinal trunks contain organic nerve-fibres. How then do we know that a congestion which is or is not followed in any given instance by an inflammation, is due to an irritation of the latter or of the former class of fibres alone? We do not doubt that most uterine diseases, which are due to irritation, arise mainly from excitation of the animal and not of the organic functions; though we are equally sure that any form of congestion may be followed by inflammation. We believe in irritation of the uterus, but we admit the frequent occurrence of inflammation also; and we must regard this chapter as a whole, and in its particulars, as not being *au niveau* with the pathology of the present day.

The eleven following chapters are devoted to irritable uterus, and its complications, and their treatment. Under the head of the complications, are inflammation of the uterus, tumors, cerebro-spinal irritations, sympathetic and reflex action; irritable rectum, bladder, urethra, vulva, and vagina; irritation and enlargement of the ovaries; irritation of the lymphatic glands, and of the pelvic nerves.

The idea of irritation of the cerebro-spinal nerves inducing simple congestion of the uterus, which is not followed by inflammation, is the basis of the treatment of these various pathological conditions. Inflammation being regarded as of rare occurrence, its treatment occupies but a page and a half; it being spoken of only as a complication of irritation. The speculum is alluded to a few times in this part, but as an instrument inflicting injury and pain. The remedies requiring the use of the speculum, caustics, leeches, scarifications, &c., are also but faintly praised. It should, however, be stated that the treatment of irritation and its other complications, recommended by Dr. Hodge, is that found most beneficial in the management of these ailments by the best modern authorities. And there are many questions of practical interest on which the extensive observations of Dr. H. enable him to throw much light.

II. The second part includes the displacements of the uterus; and we return to this, after alluding briefly to the last part.

III. The third part includes the diseases of sedation; and we think it would have been a better arrangement, had this immediately followed the first part—the diseases of irritation—and had uterine displacements occupied the third division of the work.

By sedation, Dr. H. means "the state of a part, or of the whole system, directly opposed to excitement or irritation." In a moderate state, we may term it inertia or torpidity; in a more severe or morbid state, it is sedation. Sedation is a depression of the organic, or of the animal actions, or of both. It must not, however, be confounded with a loss of power, or debility. The latter is diminution of power; sedation is a diminution of action. Of course they may coexist, but generally sedation implies merely a diminution of action, without loss of vital tone or vigor.

Sedation is, like irritation, both organic and nervous, (or cerebro-spinal.) But we will follow the author no further in the first chapter of this part.

The remaining two chapters of the third part are devoted to sedation of the uterus, or amenorrhœa; the treatment of which is specified with great discrimination and judgment.

In the first and third parts of the work, the author's observations and reflections have not, we think, made large additions to the existing knowledge of the pathology and treatment of the diseases considered. But in the second part he speaks from his own experience more exclusively; and here we find many important original ideas, both theoretical and practical.

Part second, we have said, treats of displacements of the uterus; and is divided into nine chapters.

Chapter first treats of the natural position and supports of the uterus; and here certainly we find some novel statements. The axis of the uterus is said to correspond with that of the axis of the superior plane (or inlet) of the pelvis, as is affirmed by most other authors. But that plane is made by Dr. H. to dip lower, we think, below a horizontal plane, than by any other writer; and thus the uterus is made to incline farther forward in the pelvis than it is usually represented to be. For instance, in his diagram (p. 237) the superior plane of the pelvis dips about 62° below a horizontal one; while the dip usually assigned to the former is 55° to 60° . Naëgele makes it 60° ; but the average of the best authorities is not over 55° . Thus, Dr. H. would make the axis of the uterus fall 7° farther in front of a vertical line touching its posterior lip, than the majority of observers. He therefore would regard a position as normal which another might term anteversion of the uterus. Viewed in its relation to the axis of the body, we should say that in the diagram above specified, the uterus is really in the first degree of anteversion.

Dr. H. also states that the vagina, instead of passing upward

and backward, passes downward and backward, and curves along the perineum and rectum. If we suppose the subject to be standing, (as all anatomists do,) while using these terms, this statement will appear surprising. But the author further on states that he supposes the patient, when he speaks thus, to lie on the back, as represented in the diagram. The axis of the vagina extends backward from the centre of that canal under the arch of the pubes, so that if prolonged, it will strike the upper end of the os coccygis. Thus, the uterus terminates in the vagina (or the axis of the former meets that of the latter) at an acute angle. We are not told precisely what that angle is, but are afterwards led to infer that it is 40° or 50° only, (p. 328.) In the diagram, however, it is about 60° .

The best observation in regard to the relative position of the vagina and uterus which has come to our notice, is that of Dr. Kolrausch.* According to him, the axis of the vagina prolonged backward, strikes the sacrum at the junction of its second with its third vertebra, and is almost precisely parallel to the superior plane of the pelvis. The axis of the uterus is not, however, coincident with that of the superior plane of the pelvis, but falls behind it if prolonged upward, at least 30° , while the bladder is moderately distended; so that the angle of union of the axes of the uterus and vagina is an obtuse angle of about 120° . The curve required in the uterine sound for its most facile introduction when the uterus is in its normal position, confirms the representation of Dr. Kolrausch. Indeed, we think it hardly possible in case of a very small vagina to pass the sound at all, if the angle be as acute as is represented by Dr. Hodge. Though the curve given by him, on page 361, is greater than we have before seen recommended to enter the uterus in its normal state, we do not see how even it can be made to accord with an acute angle of 60° or less. Besides, we should find it impossible to see the os uteri and both its lips through a speculum, without first dragging the uterine neck out of its normal position, if Dr. H. is correct. But both the speculum and the sound find but little favor with Dr. H. Both from our dissections and our practical experience, we feel obliged to regard Dr. Kolrausch as correct. We have dwelt upon this point, because of its fundamental importance, both in the diagnosis of uterine displacements, and in determining the benefits accruing from the use of pessaries in these ailments.

* See a diagram representing these relations, in the American edition of Tyler Smith's Lectures on Obstetrics, (p. 74.)

Chapter II. treats of the varieties and the causes of uterine displacements, and enumerates prolapsus, anteversion, retroversion, and procidentia. He also recognizes anteversion with flexion (anteflexion,) and retroversion with flexion, (retroflexion.) We discover no practical advantage in separating procidentia from prolapsus; the former being the extreme degree of the latter.

The following two chapters treat of the symptoms and the general treatment of uterine displacements.

Chapter V. gives an account of the various kinds of pessaries which are and have been in use, and the objections raised by various writers to their use.

In Chapter VI. the author speaks of his own pessary, which he calls the lever pessary; others having usually called it the U-shaped or horse-shoe pessary. But it was only the original form of the instrument which gave it that name. Dr. Hodge now recommends the U-shaped, the circular, the elliptical, but more especially the parallelogram-shaped pessary—all these being either plane, or with a single or double curvature on their original plane. We have found Dr. H's pessaries (of the forms just specified) of great value in the management of uterine displacements, and award to him the great merit of inventing an intra-vaginal appliance for their treatment which may be retained in the vagina for weeks or months, in succession, with benefit, and without inconvenience; for, with this instrument "in coitu nulla obstructio est," as the author asserts. But we must regard his idea of using this instrument as a *sine qua non* of the treatment as altogether too exclusive. We consider pessaries invaluable, and could not conscientiously exclude them, in the treatment of very many cases of displacement; but there are others in which a more rapid method of cure is, we believe, possible, and therefore preferable. His idea, also, that his instrument acts as a lever, we think, needs further demonstration.

As Dr. H. considers his own instrument to be entirely sufficient for all cases, he opposes the use of the intra-uterine pessary. We should expect some degree of timidity in the use of this latter instrument, in one who states that "the use of the speculum is itself painful and aggravates the irritation of the tissues, so that some temporary excitements and congestions are produced," (p. 62,) and speaks definitely of the use of the uterine sound, only to add that "it is very painful to some patients, sometimes almost insupportable, and generally followed by an effusion of blood and by some soreness of the womb," (p. 289.) But he further asserts that a curved pessary will, as readily as the

uterine sound, replace the womb, (in retroflexion,) when the vagina is relaxed, with comparatively little pain and no subsequent irritation, (p. 289.) We agree with Dr. Hodge, that the intra-uterine instrument should very seldom be resorted to; but we maintain, from our own experience, that a properly constructed instrument may be used in a very small proportion of the cases of anterior and posterior displacements, with the best results. We also find that the speculum, if properly applied in case of married patients, does not produce pain or irritation of the tissues; and the account of its effects quoted above has never been verified by us, unless inflammation of the uterus or vagina existed at the time. We have also not, in more than one instance in several hundreds, witnessed any effects resulting from the use of the uterine sound which did not apparently pass away in from five to ten minutes after the instrument was withdrawn—except the hæmorrhage, which may vary from a few drops to a few drachms. Moreover, we regard the assertion that an intra-vaginal pessary, of any possible form, can replace the uterus as readily as the uterine sound, as being entirely incorrect. We go farther, and record our belief that no intra-vaginal appliance can, by any possibility, restore the uterus to its normal from a retroflexed position *at all*; and this impossibility is rendered still more patent if we accept Dr. Hodge's assertion that the uterus inclines normally to the vagina at an angle of 60° in front, and of course 120° behind. If any one, referring to the diagram representing retroflexion, (p. 256,) and the one before alluded to, (237,) can discover the possibility of an instrument passing high enough into the vagina, and then far enough forward, to keep the womb where it is seen in the latter, we yield all credulity to him. But it is said the vagina must be *relaxed* in order to effect this. A reference to the diagram will show it must be *elongated* so as to ascend, to replace the uterus, as high (or nearly so) as the fundus uteri; and then, to keep it in place, the instrument must be bent into the shape of a V, so that its two parts may meet at an angle of about 60° . Dr. Hodge cannot conceive that Dr. Simpson could have cured a displacement with his intra-uterine instrument in a few weeks or months, which he admits he may not find cured with his own instrument at the end of years even; and terms Dr. Simpson's statement to this effect as "one of those assertions of an experienced physician which to most other persons is altogether incomprehensible."

We can easily believe Dr. S's statement, since his instrument kept the uterus of his patient constantly in its normal position from the

first moment of its introduction; while Dr. H's has never restored the uterus, in case of extensive displacement, *quite* to its normal position at all. We would not detract an iota from the value of Dr. Hodge's instrument; we generally find it capable of restoring the uterus so nearly to its normal position as to remove the symptoms of the displacement, and should not know how to dispense with it in our daily practice. It is the only internal support required in the vast majority of displacements. But we must limit our enthusiasm as to its capabilities; we must endeavor to understand precisely what it can and what it cannot do. Dr. Hodge's assertion, above quoted, is therefore in our view, as Dr. Simpson's is in his own, "one of those assertions of an experienced physician which to most other persons is altogether incomprehensible."

Chapter VII. includes the treatment of the various displacements of the uterus; Chapter VIII. that of their complications; and Chapter IX. the treatment of enlargements and displacements of the ovaries. We have only to commend these parts of the work.

We have stated what we consider to be the defects of this work. They affect its theoretical far more than its practical value. In the latter respect, indeed, its principal if not its sole defect is the exclusiveness of its views. The lever pessary too constantly excludes all other means. But we must remember, that Dr. Hodge only proposed to give "the results of his own observations and reflections," and it is enough for one individual to have invented such an instrument, and to have demonstrated its great value in the treatment of uterine displacements, beyond all question. But while he considers the speculum and the sound so objectionable, he candidly admits that the lever pessary also may do much harm, and definitely states the circumstances in which it may be used to advantage. But if we adopt the caution in regard to all three of these instruments, which he indirectly inculcates respecting the two former, but still use them all judiciously, we shall thus, we feel assured, achieve the greatest amount of benefit to our female patients in their peculiar diseases.

Of the many excellencies of the work we will not speak at length. We advise all who would acquire a knowledge of the proper management of the maladies of which it treats, to study it with care. The second part is of itself a most valuable contribution to the practice of our art; and with some grains of allowance for the enthusiasm of an inventor, we believe his practical conclusions will be fully corroborated by the enlightened experience of others.

Proceedings of the American Pharmaceutical Association, at the Ninth Annual Meeting, held in the City of New York, September, 1860. Philadelphia: 1860. 278 pp.

This is a very neatly-printed octavo volume, full of indications of progress in the science as well as the art of Pharmacy. Physicians must rejoice at the signs of life it evidences, since *they* are, in all of our large cities, dependent on pharmacutists for the execution of their prescriptions. If ignorance reigns in the pharmacy, unfortunate results must always attend medication; but if science is there at home, then the physician will receive that sort of aid which will make him ready to do good battle for his patient. We must have thoroughly-educated pharmacutists. The meetings of the American Pharmaceutical Association have inaugurated a spirit of inquiry and study which is gradually evincing itself throughout our land, and its results are somewhat manifest on an examination of the volume before us. The retiring President's address contains the following, showing his appreciation of the importance of the Association:

"Unquestionably our mission as an Association is to create a demand. On sanitary grounds, the public good requires us to create a demand for pharmaceutical qualifications of a high grade of character, as well in morals, care and attention to business, as in practical attainments, in judgment and manipulation. This can best be done by informing the public as to the value of such services, and the danger of sustaining a dishonest and ignorant competition."

This volume, in addition to a very full report of proceedings, including reports of speeches made on subjects of special importance, contains reports of Committees on general and special subjects. *The Report of the Committee on the Progress of Pharmacy* gives an account of the condition of Colleges of Pharmacy in this country, the necrology of men in the pharmaceutical profession, and a series of memoranda on the papers which have appeared in the Journals during the past year, that contain matters of importance to the apothecary. The latter portion of the report is really an index *résumé*, which would, however, be more useful if the reporter had arranged the articles alphabetically. As it appears now, it has all the appearance of a mere pile of clippings, whereas in fact it is evident that each article has been examined by the writer. *The Report on Adulterations* is, of course, prolific in the horrible. We have no doubt but that the low order of morality, so largely prevalent, is increasingly active in the falsification of drugs and articles of food throughout the land. The Inspect-

or of Milk in Boston reports, that "its quality is adulterated in proportion as the grade of society descends, and is most detrimental to the health of that portion of our citizens who, from other causes, are the least able to contend with it." Legislation has been too slow on this subject. The public health demands that all the energies of the government be exercised to keep it in the best possible condition.

A yeast powder is noticed with the following composition: Free phosphoric acid, bone phosphate of lime and magnesia, sulphate of lime, sand and dextrine. We have no doubt of the deleteriousness of this compound, as well as of the injury that may result from the continued use of yeast powders of *any kind*. The only modes of making bread fit for use as an *ordinary* article of food are the use of panary fermentation, and the direct admission of carbonic acid from without *into* the dough, not the formation of this acid by the decomposition of a carbonate *in* the dough.

The error as regards strychnine in whiskey is also noticed by this Committee. No hoax has been more extensively received than this. Produced by the unoccupied brain of some practical jester, it has been received by those ignorant of chemistry throughout the length and breadth of the land, without a moment's thought as to the fact that the intense bitterness of strychnine would detect its presence in any liquid.

Dr. Edward R. Squibb, whose pharmaceutical preparations have obtained so high a reputation from the profession throughout the land, furnishes a paper on Ethereal Oil. Messrs. Carney, Bullock, Proctor, Parrish, Fish, Thomas, and others, have supplied reports on subjects of more or less interest to the pharmaceutical student. A memoir of Hon. Hy. Cavendish, (evidently prepared from Wilson's Life of Cavendish,) by H. F. Fish, closes the original matter contained in this interesting volume. Although it is not so large as the volume for 1859, and, on the whole, does not contain as many valuable contributions to knowledge, still it has nothing so valueless as the report on the Silphium Laciniatum, which that contained. Our subscribers will find the book a useful addition to their libraries.

L. H. S.

The New American Cyclopædia: A Popular Dictionary of General Knowledge. Edited by GEORGE RIPLEY and CHARLES A. DANA. Vol. XI. Macgillivray—Moxa. New York: D. Appleton & Co. 1861. Pp. 788. 8vo.

A cursory examination of this volume shows that it preserves the reputation acquired by its ten predecessors, as a reliable book of reference for the student. We are living in an age of such changes and excitements, that such a Cyclopædia is absolutely necessary. *Non omnes omnia*—it is impossible to know everything, and yet it is pleasant to feel that we have an authority near us to supply us with the knowledge we from time to time require—upon which we can depend for accuracy. We believe that this Cyclopædia is, on the whole, as accurate as it is possible for such a publication to be; and this, in connection with its convenient form and low price, must continue to make it popular. We wish the publishers all the success that a really useful undertaking demands at the hands of the public. L. H. S.

EDITORIAL AND MISCELLANEOUS.

The following note, received from Dr. Barker, bears its own explanation:

Dear Doctor—Since my article in the last number of the MONTHLY went to press, I have received a call from Dr. Williams, of Chillicothe, Ohio; the gentleman who first mentioned to me, that his father, Dr. W. G. Williams, of Chillicothe, was accustomed to administer the belladonna as a preparation for labor. I am most happy to have the opportunity to acknowledge the source of my indebtedness, and beg that you will add this note as an appendix to the article.

Dr. Williams informs me that his father is still in the habit of using the belladonna for the purpose mentioned.

Very truly yours,

B. FORDYCE BARKER.

70 UNION PLACE, Jan. 20, 1861.

—It is a rule in Paris, that all surgeons who hold position in the hospitals by appointment from government, shall resign on attaining the age of sixty. Ricord, whose fame is coextensive with medical science, was born in December, 1800, and has reached the age when it became necessary for him to retire from the Hôpital du Midi, where he

has observed and taught for thirty years. Before the day arrived for his legal retirement, Ricord resigned the chair, which has since been filled by the appointment of M. Cusco.

The friends and admirers of this renowned syphiligraph united in an expression of respect, by giving a banquet to his honor, which came off at the Hôtel du Louvre, on the 27th December. A writer in the *Union Médicale*, in describing the scene, calls it an ovation, and thus enthusiastically gives the result of his impressions—a magnificent, charming fete.

The correspondent of the *Lancet* describes the occasion as follows :

Parisian Medical Banquet.—The banquet given to M. Ricord by his *confrères* came off on Thursday the 27th ult., at the Hôtel du Louvre. The great dining-room of this establishment, itself one of the lions of Paris, afforded hospitality to about 200 members of the medical profession, who assembled for the double purpose of doing homage to the great syphiligraph and justice to a very copious and *recherché* dinner. A more cosmopolitan gathering it would have been difficult to collect; for although the French element did, in the main, predominate, yet Great Britain, Germany, Sweden, Russia, Greece, Italy, the United States, and South American republics, were all duly represented on the occasion. Strange to say, that with one honorable exception, none of the Professors of the Faculty of Medicine were present to take part in the public expression of regret conveyed to M. Ricord on Thursday evening. The exact meaning of this negative demonstration on the part of the members of the official medical school of Paris, in a sense hostile to the great syphiligraph, is not very evident. Jealousy, arising from professional rivalry, is stated by some as being concerned in the matter. The public consequently will regard the absence of the Faculty from the banquet of Thursday but as another instance of personal animosity and narrow-minded ingratitude, assuming an official disguise for the indulgence of a petty feeling of revenge. The honorable exception referred to was, I need hardly say, M. Trousseau, who, following the impulses of his manly and independent character, seemed by his presence to protest against the unjust neglect of his colleagues. Owing to the absence from indisposition of M. Gubler, the honor of proposing the health of M. Ricord devolved upon M. Amedée Latour, editor of *L'Union Médicale*, who, in an excellent and effective speech, paid a flattering tribute to the man through whose single-handed exertions the “enseignement libre” had so effectually distanced the “enseignement officiel.” Next followed M. Diday of Lyons, one of the most devoted supporters of the Ricord doctrines, and editor of the *Gazette Médicale*, of that city, and with Mr. Costello, who addressed the company in English, and represented the “grateful and admiring” foreigner generally, the complimentary discourses concluded, when M. Ricord rose, and with considerable emotion replied—“I can give no better rejoinder to all I have just heard, to all the flattering terms which you have in the warmth of your friendship ap-

plied to me, than by the expression of my most heartfelt gratitude. Your intention has been by this splendid *fête* to recompense thirty years of labor, of hospital service, and clinical teaching. In no other manner could you have fulfilled your own wishes and gratified my feelings. . . . I see around me my well-beloved pupils, the elders amongst them already professors, and the juniors following in their steps with giant strides, and holding out promise of a brilliant future. In presence of such disciples, I feel that I can safely rest on my oars, well assured that you will finish whatever may have been left incomplete in the work we have begun together. Amongst the friends present to whom I would especially express my gratitude, let me name the worthy representatives of the press, that great bulwark of our interests, both scientific and professional. Amongst you, it is true, I have occasionally encountered most powerful antagonists, but much more frequently warm and generous supporters. . . . In terminating this toast let me cite two lines of Pope, which I used when a young man as the motto for my inaugural thesis, and the truth of which you have often proved to me—

“Man, like the generous vine, supported lives;
The strength he gains is from the embrace he gives.”

To you all, then, my dear friends and *confrères*, who have attached yourselves to me, and who have always supported me, let me express my thanks, my eternal gratitude, and unalterable friendship.”

—A new work on the “Injuries and Surgical Diseases of the Scalp, Skull and Brain and its Membranes,” by Prof. Gross, is announced.

Baillière, of London, will soon issue a new work on The Diagnostics of Aural Disease.

Baillière Brothers, of this city, have recently published a volume of 160 pages on Diphtheria, by Edward Headlam Greenhow, M.D.; the price of which is \$1.25.

A new work on Surgery is announced in London. It is to be composed of the contributions of various authors. The first volume has appeared. It is edited by Mr. T. Holmes, and has papers from Mr. Simon, Mr. Paget, Mr. Lee, and others.

Syphilitic Sore Throat.—Mr. Coulson, of London, uses the following application:

R.—Bi-chlorid. hydr., gr. vi;
Acidi hydrochlorici, gtt. xii;
Syrupi, ℥j;
Aquæ, ℥viij.

To be used as a gargle, but care must be taken to wash the mouth after using it.

Strychnia.—Dr. Davis, of Chicago, gives an enema containing a small dose of strychnia to relieve paralysis of the muscles of the alimentary canal, occurring after typhoid fever.

THE AMERICAN MEDICAL MONTHLY AND NEW YORK REVIEW.

MARCH, 1861.

ESSAYS, MONOGRAPHS, AND CASES.

A Paper on Diphtheria, with an Attempt to Portray its History in the United States. By JAMES WYNNE, M.D.

(Continued from page 110, February No.)

Symptoms.—Diphtheria is frequently attended with very slight constitutional disturbance, at the commencement of the attack, even where the disease is destined to a fatal termination. The patient is often so little affected, that, with the exception of some slight difficulty in the act of deglutition, he exhibits no evidences of disease, and it is with difficulty that the parents can be brought to consider this symptom as one of much importance, or the child in very serious danger.

After a short interval, however, one of the tonsils, seldom both, becomes specked with a yellowish-white deposit, which, when seen at this early stage, presents the appearance of small whitish stars in the midst of a ground of what appears to be a transparent layer of mucus, but which really is the true diphtherial membrane, through which the body of the tonsil, often of an increased redness, is distinctly seen. These spots, small at first, rapidly enlarge, the membrane loses its trans-

parency, and if not speedily arrested, spreads over the soft parts of the palate, both tonsils, the uvula, and involves the larynx, and sometimes the trachea and bronchial tubes.

Usually, even in slight cases, the local symptoms are preceded by some constitutional disturbance. There is a feeling of malaise, pain in the head, often extending to the neck, lassitude, and more or less fever. In the mild form the tongue presents a thick creamy coat, through which a few papillæ are visible; the uvula, the velum-palati, and pharynx are of a bright red color, and the tonsils swollen, and specked with the filmy deposit already described, which is generally closely adherent to the mucous membrane, although in some cases it is easily removed in its early stages by the application of the sponge probang, which is often coated with the new-formed deposits.

This membranous exudation may extend over the whole palate, but in mild cases rarely does; nor is its color much deepened, or the odor emitted offensive or fœtid. The submaxillary glands are slightly swollen, but do not attain the size which they acquire in the severer forms of the disease. Under favorable circumstances, or the application of judicious treatment, its progress is here arrested. The membrane ceases to spread, and slowly becomes detached from its connections; the mucous membrane loses its red color; the glandular swellings subside; the pulse diminishes in frequency, and the patient becomes decidedly convalescent.

The disease, however, does not always present itself in this form, but is ushered in by rigors and often vomiting, under whose influence the patient becomes so prostrated that it soon becomes obvious that the system is oppressed by a powerful poison. This condition is characterized by a high fever, a pungent skin, a rapid and feeble pulse, great difficulty in deglutition, hurried respiration, flushed countenance, and congested lips; the tongue becomes loaded by a yellow or dirty brown coat; the soft palate and pharynx assume a deep erysipelatous redness; the tonsils become greatly swollen, and the ash-colored membrane, nearly continuous and spread over one or both tonsils, extends to the uvula and the posterior walls of the pharynx. As the disease advances, these symptoms increase in severity; the breathing becomes more hurried and stertorous; the swallowing, which at first was but moderately impeded, becomes so difficult and painful, that the child is with great difficulty induced to take either food or medicine; the saliva flows from the mouth, and often a foul and acrid discharge from the nares. Should the little patient be induced to swallow, food or drink will be violently ejected, and a paroxysm of great intensity,

in which the child will gasp for breath, and with great difficulty recover itself, will ensue.

The case has now reached a point which portends the most unfavorable results. The false membrane has seized upon every visible part of palate and pharynx; the discharge of sanies mixed with blood, which issues from the mouth and nose, has become exceedingly offensive; the glands of the neck become enlarged and tender; the voice hoarse and indistinct; the pulse more rapid and feeble; and the poor patient, restless and embarrassed for want of breath, tosses about or lies on his back in a semi-comatose state; in most cases the medical attendant is apprised by a croupy respiration, when the membrane has invaded the larynx and trachea, at which time symptoms of asphyxia present themselves; the countenance becomes livid, the skin cold, the pulse feeble or gone, and the patient, either distressed for want of breath, anxiously awaits the moment when death shall relieve him of his sufferings, or rapidly sinks into an asthenic or comatose condition.

The croupal anxiety and suffocation are inimitably painted by Aretæus in the following passage:

*"Tussis spirandique difficultas enascitur, et modus mortis quàm miserrimus accedit. Pallida his seu livida facies, tristior autem cùm tonsillæ comprimuntur. * * * Cumque decumbant, surgant, aut sedeant, decubitus non ferentes. Quod si sedent, quiete carentes, iterum decumbere coguntur. Plerumque recti stantes obambulant nam quiescere nequeunt. Inspirato magna est—expiratio verò parva. Raucitas adest vocisque defectio. Hæc signa in pejus ruunt, cum subito in terram collapsis anima deficit."*

The patient is usually enabled to be up for several days after the invasion of the disease, but is finally confined to bed in grave cases by extreme prostration. There is often, indeed, great danger in assuming the erect position under these circumstances, as is evidenced in case of Dr. Cooke. Death by syncope in the advanced stage of the disease is not an unfrequent result upon any extraordinary exertion, and an aggravation of the grave symptoms is quite common.

These descriptions exhibit the mildest and most obstinate forms of the disease, between which it may present itself in every variety of intensity; at times yielding easily to medicine; and at others, although apparently attacking the patient with less force, proceeding slowly but surely to a fatal termination. The prognosis should therefore be always guarded, because it is not always possible to predict the effect of remedial agents, or the hidden force with which it may at any period develop itself.

Duration.—When diphtheria runs its course without complications, it seldom proceeds beyond the seventh, eighth, or ninth day. The result of M. Bretonneau's extended experience is, that its usual period of continuance is six days. When, however, it is complicated with croup, or scarlatina, or measles, its duration is much more uncertain; M. Bourgeois has known it, when associated with other diseases, to continue eighteen days. Dr. Ranking says that its duration is very variable; he has known it to prove fatal in forty-eight hours from the first seizure, and to continue for two weeks or more, and finally to prove fatal long after all active symptoms had subsided, either from pure exhaustion or the supervention of other lesions.*

False Membrane.—When the mouth is examined upon the first day of the pseudo-membranous deposit, the parts destined to become the seat of the disease present the appearance of pieces of flesh, bleached by contact with boiling water; soon after there appears on the tonsils, the uvula, or the soft palate, small vesicular points of a lardaceous appearance, formed by the dissolving of the epithelium, which may readily be confounded with the minute yellow patches soon to appear. The membrane is almost invariably developed primarily upon one or the other of the tonsils, but not always, as the uvula is sometimes the original seat of the patches.†

Ordinarily, at the moment of formation, or soon after, the false membrane appears under the form of a white or a yellowish-white spot, rarely gray, quite circumscribed, a little projecting at its centre, and surrounded by a circle of lively red. Sometimes the false membrane is semi-transparent, and forms a slight pellicle, which envelops the tonsil, through which the surface of this gland is partially visible; but it soon loses this transparency and becomes of a yellowish-white color, extending itself to the subjacent parts with greater or less rapidity, according to a variety of circumstances, and especially on the kind of treatment which has been adopted.‡ After the false membrane has developed itself upon the tonsils, it usually extends to the soft palate, the uvula, and finally to the pharynx, with greater or less facility, regularly involving these different parts in the order here indicated. This is not invariably the case, for sometimes it is developed simultaneously in several distinct points, which finally converge the one into the other, and finish by forming a continuous surface. While

* Ranking on Diphtheria.

† Relation historique d'une epidemie de diphtherapathie; Gaz. Méd., 1846, p. 178.

‡ Id., loc. cit., p. 391.

it is thus enlarging its boundary, the false membrane acquires an additional thickness by the crossing of successive layers, so that it is not composed of one single fold, but of many, which present a varied appearance, dependent upon the place occupied by them: sometimes appearing like a deep ulcer, with a yellow base; at others, enveloping the uvula as a finger by a glove, and on the palate having the semblance of a deep hollow.*

The period between the formation of this membrane and its dislodgment is very variable—usually from one to six days. In the early part of the disease, after being detached, a new membrane forms in its place, and this may be habitually reproduced several times. When the membrane is cast off spontaneously about the sixth or seventh day, its place is seldom supplied by a new deposit; and about the tenth day the patient is convalescent. When the case terminates fatally, the original inflammation extends to the air-passages, and not unfrequently to the nasal cavities, which likewise become the seat of a pseudo-membrane; greatly augmenting the sufferings of the patient and the gravity of the disease, whose termination is heralded by the foetid, sanious discharge from the nostrils, and symptoms of angina, which speedily supervene.

When the termination is hastened by the supervention of gangrene, the pseudo-membrane loses its consistency, is easily detached, changes to a grayish color, frequently mixed with bloody spots, and is coated with a sanious fluid, which flows from the mouth and nostrils, and emits a very foetid odor. The flow of blood in these cases is sometimes considerable, and not unfrequently covers the lips and nasal cavities; in which latter the flow is often arrested by the formation of clots.

Whatever may be the time at which the false membrane becomes detached, it generally exhibits the subjacent tissues diminished in size, and of a redness more or less intense in color. This diminution in size is especially noticeable on the tonsils and uvula. The false membrane does not always occupy the same seat. MM. Rilliet and Barthez have given the relative proportion of cases in which the membrane was observed by them in various positions, as follows:

Upon the tonsils alone,	6
Upon the tonsils and some part of the soft palate,	4
Upon the tonsils, the velum of the palate, and the pharynx,	6
Upon the tonsils and the pharynx,	5

* Rilliet and Barthez. *Maladies des Enfants*, vol. i., p. 252.

Enlargement of the Submaxillary Ganglions.—The enlargement of the submaxillary ganglions, usually accompanied by an inflammation of the throat, is a symptom so universally present, that M. Bretonneau has seldom failed to notice its presence in any of the numerous cases that came under his own personal observation. It makes its appearance from the first to the fifth day, and is always attended with a marked aggravation of the local symptoms. The seat of the enlarged glands is usually at the angle of the lower jaw, in the neighborhood of the apophysis mastoid.

Symptoms as Observed by Others.—Dr. Pichenot, who noted the progress of the epidemic in the Commune of Creusery, in 1855, in his report to the Académie de Médecine at Paris, thus describes the usual progress of the disease:

“The affection begins by a sort of general malaise, yet not sufficient to hinder the child from its ordinary play. In a short time, however, a difficulty of deglutition is experienced, and an undetermined pain in the neck and head. Usually there is no appetite, the mucous membranes of the mouth and nose are dry, the tonsils augmented in volume, and the patient refers to the ears the sense of pain felt in deglutition. In a short time all these symptoms are increased in intensity; vomiting and pain in the abdomen soon follow, accompanied either with constipation or diarrhœa. The pulse is frequent, irregular, and depressed. The voice is altered, the respiration painful and croupy, and a cough follows the attempt to drink, or even to open the mouth. The tonsils press upon the folds of the soft palate, and their surface is injected with a thick grayish deposit. But it is upon the mucous membrane of the posterior portion of the throat that the “diphtheritic plaques” usually present themselves, and their grave condition here almost invariably presages grave and rapid disease, and not unfrequently a fatal termination. The pain in the head and neck now becomes augmented, the respiration more difficult, the face œdematous, and the maxillary glands tumefied, and sensitive to pressure.

Its march is very rapid. In the space of from three to five hours, the papular eminences of the throat become covered with a flocculent, transparent veil, of white appearance. Generally, not more than one-half of the guttural cavity is at first invaded. The remainder of the mucous surface of the throat, the uvula, and the nasal cavities not being affected by the membrane, which soon loses its transparency, augments notably in thickness, and degenerates into the true diphtheritic membrane, of a gray or yellowish color.

The false membrane is not always continuous, and I have seen several times the tonsils, and the pharynx, in whole or in part, recovered from the membranous deposit while it was progressing upon the soft palate. The membranous fold is easily separated by traction, the use of caustics, and often by nature, when it appears circumscribed by a red circle. In all these cases it returns again very promptly, but is less thick, and is often reproduced upon a surface, which exhales a foetid and sanious liquid. In some very rare cases, the membrane never falls, but is slowly reabsorbed. The voice becomes nasal; the mouth, which rests open, and the nostrils, exude continually an ichorish fluid, which becomes more foetid as the disease progresses, and thickened with the exfoliated shreds of the false membrane. The head, neck, and chest often present a uniform plane, in which the swelling is considerable. Respiration and deglutition are rendered almost impossible, by the increased size of the tonsils and the invasion of the false membrane; the prostration is extreme; the patient is not able to raise his head; the pulse becomes imperceptible, the extremities cold, the intelligence almost always intact, the lips cyanosed, the eyes vitreous, and death comes to terminate the frightful spectacle.

Such are generally the symptoms when the case terminates fatally. During the first four months of the epidemic, death occurred from the second to the fourth day of the disease, and life was rarely prolonged beyond the sixth. Upon the decline of the epidemic, the progress of the disease was more tardy, and frequently extended to the tenth day.”*

Dr. Fourgeaud, of Sacramento, says, “The disease begins in a very insidious manner, by a little engorgement or inflammation of the soft palate, pharynx, and one of the tonsils. At this period the patient complains but little; there is often no fever, or it is very moderate. The pain in the throat is much slighter than in the usual forms of sore throat; so slight, that the little patients go about playing as if nothing was the matter. In some exceptional cases, the fever and inflammation about the pharynx are considerable from the beginning. The characteristic signs of the invasion soon follow. They consist in small portions of white or yellowish lymph deposited on the palate, the tonsils, and the posterior part of the pharynx. The cervical and submaxillary glands become swollen, and the pain in swallowing and opening the mouth is occasioned more by the engorged state of the

* Rapport sur les Maladies qui ont Règne en France en 1855. Mémoires de l'Académie Impériale de Médecine, vol. xxi.

glands than by the internal secretion of lymph. These deposits go on increasing in size more or less rapidly, and in violent cases in a few hours the whole cavity of the throat is covered by them. Generally, one side is more affected than the other, and the glands corresponding with the parts affected are more swollen than those of the opposite side."

Dr. Blake remarks, that "the first effect produced by the poison is evidently on the nervous system. Drowsiness, prostration, or oppression is manifested by infants, or complained of by adults; and when the disease is prevailing, this desire of children to sleep at other than usual hours should awaken our suspicion. The pulse is accelerated from the first, but generally soft and typhoid; although in some cases it is for a few hours rather hard. The temperature of the skin is raised, although seldom harsh or dry; and frequently moist, or even covered with profuse perspiration. There is seldom any pain; rarely headache or backache. The tongue is usually coated, edges red, papillæ prominent. The appetite may remain good, and the digestion unimpaired. If we examine the throat, we may find, even within twelve hours after the occurrence of the first slight symptoms, the tonsils covered with a gray pultaceous exudation, which rapidly extends upward into the nostrils, and downward towards the larynx; and again, we may detect only a redness of the tonsils, and a small point of exudation, two or three days after the commencement of the disease, and at a time when the symptoms of general prostration had become alarming. Again, cases may present themselves in which the general symptoms and the anatomical lesions proceed *pari passu*; but in almost every case that I have seen, I have considered that death was the result rather of the action of the poison on the system, than from obstruction of the larynx. In from twelve to twenty-four hours after the formation of the false membrane, we generally find the cervical glands enlarged; and in severe cases, this enlargement may afford a serious obstacle to respiration and deglutition."*

Prof. Thayer, in his excellent essay, says:

"The most noticeable feature in the pathology of diphtheria—and the most important in view of the prognosis and the treatment—is that which may be called the blood-poisoning, that condition of the blood evinced by the hæmorrhage, and by the adynamic symptoms which appear at one stage or another in nearly all the cases. In ordinary cases these symptoms appear after three or four days; in those of the

* Pacific Medical and Surgical Journal, August, 1858.

greatest malignity, they are visible at the outset; in a certain proportion of cases which recover, they become more manifest during the convalescence than previously. The condition of the blood must be judged from the results, for we have not, I think, any analysis of it in diphtheria; but there is little doubt that there is more or less disintegration of the red corpuscles, and that the malignancy of the disease is in proportion to the extent of this destruction. Whether or not this constitutes all the visible changes in the circulating fluid, it is evidently rendered unfit for healthy nutrition by a putrescent poison. If the coexistence of renal disease with diphtheria, or its occurrence during the convalescence, should be established hereafter as an occasional fact, it will furnish another evidence of a peculiar blood-poisoning. Several observers have reported single cases in which the urine was found to be albuminous, while others have failed to find albumen in repeated examinations."

Sequelæ.—Those who recover from severe attacks of diphtheria are often feeble for months afterwards. Anæmia is especially a characteristic of convalescence; besides which, nervous affections of a peculiar kind often ensue; among these are impairment of vision, deafness, want of action in special muscles, and partial paralysis. Faure, who is quoted by Dr. Slade, in his prize essay, says, "Very remarkable disorders show themselves also within the throat, for the velum is completely paralyzed, and hangs like a flaccid, lifeless curtain, which interferes with speech and deglutition."

Anatomical Lesions.—The post-mortem examination usually discovers the tonsils, uvula, and pharynx draped in a dense false membrane one or two thousandth parts of an inch in thickness, of a yellow or whitish-yellow, and sometimes of a gray color. It is usually found as adherent to the pharynx and soft palate as the mucous membranes ordinarily are. The tonsils, which are rarely entirely enveloped, are covered with portions of the membrane, through the apertures in which the substance of the gland appears. The pharynx is often inclosed in a fold of this membrane, which presents the appearance of a yellow cloth; sometimes continuous, and sometimes broken; frequently tinged here and there with a gray hue, which has led to the belief that it was in a state of gangrene. This false membrane is composed of several folds, superimposed the one upon the other, and lies directly upon the mucous membrane. In its chemical characteristics it resembles false membranes of the larynx generally. The foetid odor, which is so intolerable during the last days of the disease, is not observed in the body after death. The mucous membrane, which lies in conti-

guity with the pseudo-membrane, ordinarily preserves its usual consistency and character, and is not, as has sometimes been imagined, superseded by it. On the contrary, it is found adherent to the parts usually covered by it in a condition but little changed from its normal character, except when it has become involved in the inflammatory action developed in the contiguous soft parts. M. Bretonneau remarks: "*Des ecchymoses peu étendues, ainsi qu'une légère érosion des surfaces sur lesquelles la durée du mal s'était prolongée sont le plus graves altérations de tissu.*"

It sometimes happens that the tonsils are found in a swollen and rough condition, with an irregular appearance, in various portions of which an ulcerated surface is exposed amid the surrounding folds or patches of false membrane; in which case, the mucous membrane will have become greatly altered, or altogether absent, allowing the false membrane to repose directly upon the muscular fibres of the ulcerated gland. The same observation is true in regard to the ulcerated surfaces upon the soft palate, the pharynx, and the larynx, and is especially so in relation to that part of the pharynx which comes into immediate connection with the œsophagus. It must be borne in mind, however, that although primary pseudo-membranous inflammation sometimes terminates in ulceration, it is far from being an ordinary occurrence; while, on the contrary, in a secondary condition it is not unfrequent.

When the termination of diphtheria is by gangrene, its seat is usually in the tonsils. When this is the case, the body of the tonsil exhibits a little cavity of variable extent, usually situated near the centre of the gland, partly filled with a greenish, sanious fluid, and partly with the remnants of the gland, converted into the same greenish-colored substance, with the fluid with which it is associated. The walls of this small cavity are injected, softened, and emit a fœtid and gangrenous odor. Much more rarely the pharynx and the soft palate are the seat of gangrene; in which case, they become soft, friable, covered with a greenish sanies, and emit the unpleasant fœtid odor peculiar to the gangrene of the tonsils.

A lesion which is regarded by M. Bretonneau as almost always present, is a tumefaction of the submaxillary ganglions, especially those situated near the angle of the inferior maxillary bone, in which position they often acquire the size of a walnut. At the early stage of the disease, they are uniform in their increase, soft to the touch, and of a light rose color; while at a later period they assume the color and consistence of the kidney.

Portions of the false membrane lining the back part of the throat are often seen divided into small patches—soft, bleached, of a light gray or greenish color, and dispersed in small fragments, from the tonsils to the pharynx. When found in this condition, they are bathed in a purulent fluid, fragile, and of so little tenacity that it is impossible to separate their folds, or even to raise them intact from the surfaces on which they are found. In cases like these, the intermediate parts are red, inflamed, and often covered with an abundant deposit of pus.

Diagnosis.—It is not a difficult matter generally to give a correct diagnosis in diphtheria, especially when the practitioner is cognizant of the fact that a false membrane has been or is forming. The diseases with which it is possible to confound it are angina maligna and croup. In the first of these affections, the medical man has the general symptoms of scarlatina to guide him, and especially the eruption, which is absent in diphtheria. In scarlatina, the tonsils are of a bright red, resembling the juice of the strawberry, and the membrane which covers them is simply inflammatory; while in diphtheria, the hue is deeper. The exudation in scarlatina is white, opaque, cheesy, and easily furrowed; while in diphtheria it is yellowish, tenacious, and not easily impressed by the action of a hard body. The inflammatory action in scarlatina is observed at the beginning in all the soft parts of the throat; while in diphtheria it almost invariably shows itself at the commencement upon the tonsils. As the disease progresses, diphtheria manifests a tendency to invade the air-passages, which is not one of the characteristics of scarlatina.

The main distinction between croup and diphtheria is to be found in the part affected. In croup, the trachea is primarily the seat of diseased action; in diphtheria, it is only reached after the disease has made considerable progress. In croup, the earliest symptom is stridulous breathing; while in diphtheria, the primary symptoms are chiefly observed in the organs of deglutition. In croup, the false membrane on the tonsils is not present; in diphtheria, it is an invariable symptom.

Complications.—Diphtheria may manifest a disposition to the formation of a false membrane in other parts than those primarily affected, as the skin, the mucous membranes of the nose, the ears, the lungs, and the anus; or it may prevail coincident with other affections, as influenza, bronchitis, measles, scarlatina, erysipelas; or it may be affected by a particular epidemic condition, in which it be-

comes complicated with hæmorrhage of the nose, skin, and mucous membranes of the intestines or lungs, or a typhoid type of disease.

Prognosis.—When diphtheria is confined to the tonsils, it usually terminates in a restoration to health; but when the false membrane extends to the nasal cavities or the larynx, especially if accompanied with grave constitutional symptoms, the patient is placed in imminent peril. Even in favorable cases, the prognosis should be given with much consideration.

Treatment.—The practitioner has three important indications to fulfill in the treatment of diphtheria:

1. To arrest the spread of the pseudo-membrane.
2. To alter the character of morbid action, upon which the formation of this membrane depends; and
3. To sustain the patient until these shall have been accomplished.

These necessarily involve both a local and general treatment.

The local treatment consists chiefly in the application of caustic and astringent substances, in one form or another, to the affected part. Of these, the most usual are nitrate of silver, either solid or in solution, powdered alum, chloride of lime, chloride of soda, sesquichloride of iron, and hydrochloric acid.

M. Bretonneau almost invariably employed the last of these remedies as a local application in his own practice, with the most marked success. The hydrochloric acid may be employed very nearly of the strength of the dilute acid of the shops, or considerably reduced in strength—dependent upon the severity or mildness of the attack. The best method of applying it is to moisten a small sponge attached to a probang or a camel's-hair pencil with the fluid, and while depressing the tongue with the left hand, to carry the brush forward with the right, until the fauces are reached, when those parts of the tonsils, uvula, or soft palate on which the membranous deposit appears, may be moistened with the fluid, and the instrument withdrawn. The hydrochloric acid should be applied not only to the membranous surface, but to the parts immediately surrounding it, by which means the spread of the membrane is often arrested. The application should be renewed several times a day. Care, however, must be taken not to apply it of too great strength, or too often at the onset of the disease, especially if the symptoms are not of an aggravated character; otherwise the local disease may be enhanced, by the unnecessary injury inflicted upon the surrounding parts. The symptoms often appear momentarily aggravated by the local application, which is not unfrequently followed by an attempt to dislodge the

membrane by vomiting. Should this latter result follow, the tonsils and palate will appear as if shrunk in substance, and spotted here and there with a few drops of blood upon the surface formerly occupied by the membrane.

When this does occur, the application may be renewed directly upon the surface of the gland, in order to arrest the almost invariable disposition of the membrane to renew itself upon the abraded part. As the disease progresses, and the membrane extends towards or into the pharynx, the difficulty in making local applications becomes greatly enhanced; but the practitioner should not hesitate, for fear of inflicting temporary pain, from thoroughly exploring and covering the parts affected with the solution of hydrochloric acid. For the purpose of effecting this, it is often necessary to place the head of the patient upon the knee of an assistant, and with a spatula to depress the tongue and the lower jaw firmly at the same time, by which means a view of the whole fauces may be obtained, and an opportunity afforded of making a thorough application of the local remedy.

Nitrate of silver has been warmly recommended by Trousseau, Guersant, and Valleix, in France, and was the application almost universally resorted to in England at the commencement of the epidemic in that country. The usual mode of using nitrate of silver in England was in solution. Dr. Kingsland advised a solution of 16 grains to an ounce of distilled water; and Dr. Hart, 30 grains to an ounce of distilled water. The mode of its use resembles that of the hydrochloric acid.

When the local application of nitrate of silver is made in a solid form, care should be taken that it does not slip from the holder, or break, as in such an event it might fall into the stomach. Such an accident actually happened to M. Guersant; fortunately, however, the stomach rejected it; but this might not always occur, and few medical men would be willing to take so hazardous a risk. Dr. Hauner, of Austria, considers nitrate of silver as the very best local application to the diseased surface, and advises its use in a solution of from a scruple to half a drachm, to an ounce of water.*

Subsequent experience did not confirm the good opinion entertained for nitrate of silver among the English practitioners, and many who were at first loud in its praises came to disuse it altogether. A substitute for this was found in the sesquichloride of iron, which is recommended by Dr. Ranking as being very efficacious in its effects upon

* *Österreichische Jahrbuch für Kinderheilkunde*, 1859, vol. ii.

the false membrane. He advises its use in the form of a gargle, of the strength of two drachms to eight ounces of water, to be applied to the throat by means of a brush.*

In the United States, opinion appears to be divided as to the best local application. Dr. Blake, of Sacramento, has found the greatest benefit resulting from an application of strong hydrochloric acid; a view in which he is sustained by Dr. Bynum and Dr. Thomas, both of whom have had much experience in the treatment of the disease.† Prof. Comegys, of Cincinnati, is in the habit of applying nitrate of silver, either in substance or strong solution in water. Sometimes, when the ulcerations are deep, he touches them with strong nitric acid, by means of a brush. In some cases he has employed with considerable benefit inhalations of tannic acid dissolved in sulphuric ether, applied by means of a cloth wetted with it, to the mouth.‡ The formula is:

R.—Tannic acid, f. ʒij.
Sulph. ether, f. ʒj. M.

Dr. Jacobi, of New York, who, as physician to the Canal Street Dispensary, which treats a large number of German children, has had a very large experience, says:

“The local treatment consists of cauterization of the membranes and surrounding parts with the solid nitrate of silver, or with strong or mild solutions of the same salt in water, (ʒss-j.: ʒj.;) of gargles, consisting of solutions of (or applying in substance) astringents, such as tannic acid, alum, sulphate of zinc, or claret wine; in gargling with, or applying, such medicinal agents as are known to have some effect on the constitution and tissue of the pseudo-membranes, as chloride of potassium, chlorates of potassa and soda, diluted or concentrated nitric or muriatic acids, liquor of sesquichloride of iron, etc. Astringents will prevent maceration, render the exudation dry and hard, and alter the consistency of the surrounding hyperæmic and œdematous tissue. It will thus prevent, sometimes, the extension of pseudo-membranes to the neighborhood of the parts already affected, and in some cases may accelerate the expulsion of the membrane as a whole. We have thus seen the best effects from tannic acid, either applied directly to the parts by means of a curved whalebone probang, or dis-

* Ranking on Diphtheria.

† Transactions of the Third Session of the Medical Society of the State of California, p. 108.

‡ Proceedings Cincinnati Academy of Medicine.

solved in water as a gargle, (3ss-ii.: ʒ i.) Of the tinct. sesquichlor. iron we have seen no particular effect. Cauterizations with nitrate of silver we have found to be generally of very little use when applied to the pharynx. Its effect is superficial only; it will form a scurf, but will destroy nothing. Destruction of the parts cannot be effected except by forcing the caustic into and below the membrane; this can seldom be done in the pharynx of children, and for this reason cauterization is unavailing at this point, but will prove beneficial, we believe, by confining the process of exudation to its original locality. In cutaneous diphtheria cauterization may be exercised to its full extent; but as these cases are generally attended with extreme prostration, the general treatment will prove both more necessary and successful. If cauterization is to be resorted to, we generally use, and with good effect, more or less concentrated muriatic, or acetic, or nitro-muriatic acid. Where, however, cauterizations are made, great caution is necessary not to mistake afterwards the result of the caustic for pseudo-membrane. This remark is particularly applicable where nitrate of silver has been used."

Alum, chloride of lime, and calomel are sometimes recommended. When their use is deemed advisable, they may be applied by dipping a brush or the finger in the dry powder, and carrying it directly to the affected part, or blowing them through a quill.

Prof. Metcalfe advises the use of the bromide of iodine, in the form of two drops to an ounce of the mucilage, or gum-arabic, as a topical application. He also gives drachm doses of this mixture internally, with the happiest results.

When there is a considerable accumulation in the nares and behind the velum, the *débris* and foul secretions may be removed, and much temporary relief obtained, by an injection of an infusion of chamomile with a few drops of creosote, which may be best effected by a laryngeal syringe. The syringe of Dr. Warren, of Boston, answers a very good purpose for injecting fluid either into the nares or below the epiglottis. It, however, is liable to the objection that it is likely to produce irritation, by coming in contact with the irritable portion, exactly at the opening of the glottis, which is found, by the researches of Prof. Horace Green, to be the seat of sensibility, instead of the epiglottis, as has heretofore been supposed. The common glass syringe, with either a curved extremity or a straight one—dependent upon the part to be reached—answers all ordinary purposes, and possesses the advantage of being easily obtained at the apothecaries, and is of slight cost.

For correcting the fœtor of the secretions, the chloride of soda, in the proportion of one drachm to six ounces of water, may be used with much benefit. Dr. Ranking suggests, on the supposition of the presence of some vegetable parasite, the use of sulphurous acid and hyposulphate of soda, in the form of a saturated solution.* "The power of the latter," he adds, "in destroying the fungoid growth of favus, as well as the oïdium which infests the vine, I have myself experienced; and I strongly recommend it, provided the vegetable origin of diphtheria be confirmed by further observations."

Much relief is often afforded by inhalation, especially after the second or third day of the attack. An excellent means of fumigation is to pour boiling water upon catnip, or the leaves of any similar plant, with the addition of a little vinegar, and to allow the patient to inhale the fumes, either by inclosing the head under a blanket, or by applying the mouth to a tube connected with a close vessel containing the materials from which the vapor is generated. The immediate effect of fumigation is extremely grateful to the patient. Dr. Gurdon Buck advises the addition of Labarroque's solution of the chloride of soda, in successive portions of a tea-spoonful each, to the liquid used for fumigation. Mr. C. T. Hodson recommends the inhalation of boiling water, to which has been added a table-spoonful of chlorinated lime.

General Treatment.—The general treatment must be regulated by the type of the disease. Shortly after the appearance of M. Bretonneau's treatise, a great variety of treatment was recommended by different practitioners, all, however, with a view to arrest inflammatory action. Leeches to the neck, counter-irritation, especially by means of blisters, active mercurialization, and purgative medicines furnished the basis of most of the plans advised. Calomel, especially, obtained great celebrity, and was at one time considered as the most effective remedy in arresting the progress of the disease. It was first prescribed by Dr. Conolly, who was residing at Tours, at the appearance of the disease; and was so efficient in his hands, in minute doses, as speedily to find favor with the French practitioners. But, whatever may have been the success attendant upon its administration at that time, it is now found to require great caution in its use.

Blisters are contra-indicated, and so far from furnishing relief, tend to increase the danger, by assuming an unhealthy, and frequently sloughy, appearance. The bites of leeches often give rise to

* Ranking on Diphtheria.

passive bleeding, extremely difficult to arrest, which greatly reduces the already exhausted energies of the patient. Everything, in fact, which tends to lower the powers of life, or induce prostration, should be sedulously avoided, in the type of disease which at present prevails; and certainly differs from that for which Bretonneau, Conolly, and other medical men in France at that period were called upon to prescribe.

The type of the disease as it now prevails exhibits a tendency to extreme prostration from the very beginning, and requires a tonic treatment to sustain the patient. The most effectual method of accomplishing this is by means of quinine, the various preparations of iron and steel, stimulants, in the form of brandy, milk punch, and wine whey, and a generous diet, consisting of beef-tea, Liebig's extract of meat, and a strong decoction of coffee. Sulph. quinine may be administered in grain doses, conjoined to two grains of the sulph. of iron, repeated as often as the symptoms appear to require—usually every three hours. It is well to alternate this remedy with doses of chlorate of potassa, which appears to exercise a beneficial influence upon the disease of the mouth and throat. Chlorate of potassa may be given in doses of from five to ten grains, in distilled water, or a bitter infusion. Prof. Barker, of New York, advises the chlorate of potassa, in doses from 3ss. to 3j. The chloride of soda has been recommended with the same intention, but does not appear to be equally efficacious with the chlorate of potassa.

The tincture of the sesquichloride of iron has met with much favor among the English practitioners, as a tonic. Dr. Ranking gives it the preference to other tonics, although he frankly admits that it matters but little which of this class of medicines is used, provided the strength of the patient be sustained. "Personally," he remarks, "I give the preference to the tincture of the sesquichloride of iron, not only from the inference drawn from the analogy of its unquestionable usefulness in the more asthenic forms of erysipelas, but also from the positive evidence of its benefit derived from the experience of several gentlemen in the country, amongst whom I may mention Mr. Dix, of Smallburg; Mr. Prentice, of North Walsham; and Mr. Cowles, of Stalham; each of which has had unusual opportunities of testing its advantages." The tincture of the sesquichloride of iron may be administered in doses of from eight to sixteen drops, in a little water.

Whatever may be the success or ultimate failure of this remedy, its first introduction into the treatment of this disease is undoubtedly

due to Professor Thomas P. Heslop, of Queens College, Birmingham, who, after repeated trials in his own practice, brought it to the attention of his clinical class at Queens Hospital and the Medico-Chirurgical Society of Queens College. His own success appears truly astonishing. "I have given in this disease," he says, "to an adult twenty-five minims of the London tincture of the sesquichloride of iron every two, three, or four hours, and have conjoined a few drops of dilute hydrochloric acid. I have also applied daily, sometimes twice a day, by means of sponges, a solution of hydrochloric acid, but little weaker than the dilute acid of the London Pharmacopœia, and have always enjoined the regular use of weak gargles of the same acid. This, with the constant administration of stimulants, beef-tea, milk and jellies, has constituted my treatment; and I repeat here, what I have already stated in other quarters, that since I have become aware of the value of this medication, nearly ten months, I have not lost one case." An excellent formula for administering a combination of chlorate of potassa and the sesquichloride of iron is: Chlorate of potassa, from 8 to 20 grains; tincture sesquichloride of iron, 10 to 25 drops; rose-water or orange syrup, one drachm; water, four ounces. Where there is difficulty in administering medicine, the bulk may be reduced by omitting the water altogether, and increasing at pleasure the amount of syrup. The success which has attended the use of this remedy in England warrants a careful trial of its merits at the hands of practitioners in the United States.

Where the disturbance of the secretions appears to indicate the use of mercurial preparations, and they are not positively contra-indicated by the depressed state of the patient, calomel may be administered, in doses of one-tenth of a grain, mixed with sugar, and placed dry upon the tongue. Dr. Bigelow has found this remedy valuable in the disease as it prevails at Paris; and Mr. Thompson was equally successful with it at Launceston, England. Dr. Anderson, of New York, and Dr. Briggs, of Richmond, have employed calomel with marked benefit. It is a question, when calomel and chlorate of potassa are administered conjointly, whether the effects of the potassa do not entirely annul those of the calomel. Dr. Bigelow, as the result of some very recent observations, says, that although it may retard or prevent the specific effects on the salivary glands, it does not in any way modify its action upon the secretions. It may be well, however, when the effect of the calomel is important, to intermit the use of chlorate of potassa for twenty-four hours, or to alternate the use of these medicines at wide intervals between the administration of the two.

Emetics are serviceable when portions of the detached membrane are lodged in the throat, without being expelled, or when the disease is making rapid progress, and threatens to invade the larynx. The action of the emetic in this instance is frequently to detach the pellicle and dislodge the pseudo-membrane. At the same time that the membrane is thus ejected, the throat is relieved of the foul secretions which might otherwise be received into the stomach, to the great detriment of the patient.

But, whatever treatment may be adopted, the fact should never be lost sight of, that the system is laboring under the influence of a powerful and most depressing poison; and it matters but little, so far as the constitutional treatment is concerned, whether this poison be at first local, and afterwards disseminated through the system, or is from the beginning of a general character, and incidentally developed in the mucous membranes of the air-passages. In the performance of her functions in the elimination of this poison, Nature requires to be sustained, not only by the free use of the tonics already indicated, but by a liberal allowance of the most concentrated and nutritious articles of diet, in which beef-tea, milk, eggs, brandy, wine, and coffee stand prominent. When there is difficulty in swallowing, not only these articles of diet, but quinine, may be introduced, by means of injections; a resort to which should not be deferred until it is impossible to administer medicines by the mouth, but whenever the difficulty of swallowing becomes at all a prominent feature in the complaint. •Injections should not be administered in greater quantities than two ounces at a time, and should not be often repeated; otherwise they will give rise to a local irritation in the rectum, which will prevent their retention. One or more drops of tinct. opii, according to the age of the patient, will greatly aid in the retention of the injection.

After the violence of the disease has been checked, a continuance of the tonic treatment should be persevered in for some time, not only to prevent the sequelæ liable to follow, but a recurrence of the attack, which often reappears after an interval of several weeks, especially when the patient is exposed to those depressing influences which are too frequently attendant upon poverty and uncleanness.

On Retinitis Pigmentosa. By JULIUS HOMBERGER, M.D., New York.
Late Chef de Clinique of Dr. Sichel, Paris.

Pigmented retina was first described by Donders, of Utrecht, as a peculiar disease of the eye-ground, characterized by black points, spots, and lines in the retina, easily detected by the ophthalmoscope. The first case mentioned by Prof. Donders was observed in the eye of a person 35 years of age, who was killed by an accident, having been blind from his early youth, in consequence of an attack of variola. The eye in question presented a degeneration of the cornea, which greatly resembled the sclerotica. The epithelium of the cornea was sound; the iris, the musculus Brückianus, and the ciliary processes were atrophied, the last two partially showing fatty degeneration. Donders' first opinion was, that the deeper strata of the retina were atrophied, and that the superior ones were occupied by a peculiar mass of pigment, particularly in the neighborhood, and following the course of the vessels of the retina.

These accumulations of pigment formed, according to him, a black net over a red ground, when the diseased eye was observed with the ophthalmoscope. Donders admirably compared it to the corpuscula ossea, as seen under the microscope.

Graefe had called attention to certain amblyopies, with atrophy of the pupil, and "black spots" near the equator of the eye, before Donders had given his specific description. These amblyopies were complicated with cataract, obscurations of the corpus vitreum, sclerectasy and constitutional syphilis.

Dr. Liebreich, one of Graefe's assistants, and Von Tright, a pupil of Donders, had also mentioned a few cases where the "black spots" in question were combined with the results of a previous inflammation. Donders put much value upon these peculiarities and complications, and reasoned therefrom, that the pigment depended upon an exudation consecutive to a retinitis. Ophthalmologists generally now commenced to observe these cases, and various observations of "speckled" or pigmented retina were reported in journals. All observers agreed that the disease progressed slowly, and always found that the field of vision was limited even in the earliest periods of the disease, with almost entire obliteration of eccentric sight in more advanced cases, but that the functions were not always disturbed in proportion to the amount of material changes; yet these functional changes were generally more serious than those observed in cases of even very severe circumscribed choroiditis or cyclitis.

Donders observed that after a while atrophy of the papilla and the central vessels generally followed.

Clinical observations alone, however numerous and exact they might have been, would probably never have clearly revealed the nature of the disease.

The microscopical study of various eyes extirpated by Dr. de Graefe, and examined by Dr. Schweigger, has, however, thrown some light upon the subject.

Schweigger has established the fact, that retinitis pigmentosa is always the result of a *peculiar choroiditis of a very chronic form, characterized by black reticulated spots and accumulations of pigment in the retina and around its vessels, causing an atrophy of the nervous elements of the retina, and an augmentation of those of the cellular tissue.*—(Heinrich Müller.)

The eye first examined by Schweigger was taken out for an enormous hydrophthalmus and sympathetic inflammation of the healthy eye. It showed the remains of a very severe iritis, in the form of a thick and vascular false membrane covering the pupil and the posterior side of the iris. The iritis had produced on the anterior part of the globe an inflammation of the choroidea, with a large serous exudation into the corpus vitreum. The latter was liquefied and increased in volume, the papilla excavated, the sclerotica partially atrophied and united with the choroidea at several points. The enlargement of the globe had seriously injured the choroidea, which had lost almost all its pigment. *Numerous black colored amorphous "hills" covered the inner part of the choroidea, and entered into the substance of the retina.* At several points the retina and choroidea could not be separated, some portions of the one remaining attached to the other. At these points the nervous elements of the retina were destroyed, some filaments excepted; while the areolar tissue was increased, all the remaining portions of the retina contained pigment.

In that case, the serous exudation coming from the choroidea, perforated the retina, and in this manner the destroyed pigment epithelium was washed away by the exudation, and deposited in the retina, particularly around the vessels, because the meshes of the areolar tissue are not so close around them. It may be that the retinal pigment does not always come from the choroidea, as we have explained, but that exudations of the choroidea may be changed into pigment, and deposited on the external side of the retina.

Dr. Schweigger does not attach much importance to the pigmentary infiltrations of the retina; he even presumes *that the same changes*

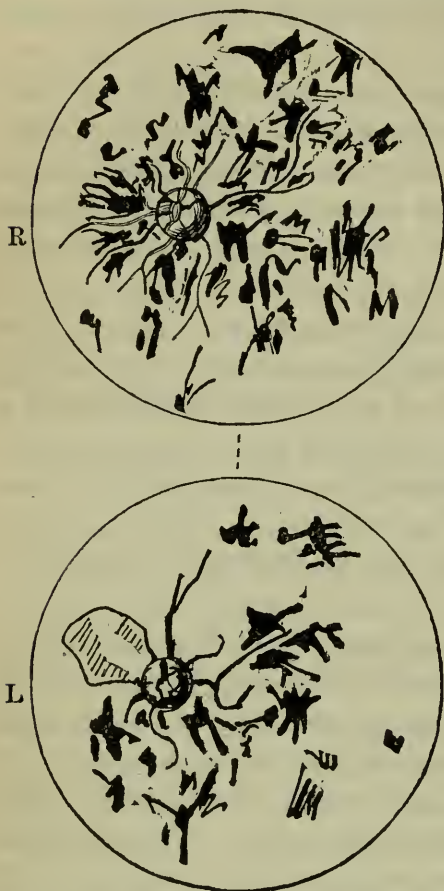
in the choroidea, which float off the pigment, may often exist without being followed by deposits of pigment under the retina, so that, ophthalmoscopically, the appearance is the same as that called "cerebral amaurosis."

This theory is not yet established, nor is it easy to sustain it by experience; but the fact that small masses of pigment are associated

with almost entire blindness, and a small field of vision, while large colored spots sometimes cause very little disturbance, would seem to verify it.

Having now given a brief sketch of the history and nature of "pigmented retinitis," or, perhaps, it would be better to say, "pigmentary choroiditis," I may close this paper by illustrating it by a case I observed in Prof. Graefe's clinic, notes and drawing of which I took at the time.

A woman, about fifty-two years of age, presented herself for blindness, being totally unable to conduct herself. She is entirely blind in the left eye, not being able to distinguish day from night. In the right eye the field of vision is very limited; she can just discern the light of a lamp when it is moved



in the room. Both of her eyes present obscurations of the lens. Slight cloudy membranes are observed near the posterior pole of the lens, which are easily looked through by means of the ophthalmoscope, the eye-ground being distinctly seen at the bottom. The iris is degenerated in both eyes, so that its texture and fibres cannot be exactly distinguished. The sclerotica is normal.

There are no obscurations of the corpus vitreum; the papillæ are deeply excavated; the vessels in their neighborhood only are distinguishable, looking like yellowish-white lines. Almost all the eye-ground, and particularly the upper parts of it, (the under part in the image, for I observed it inverted,) is covered with spots, (already described.) The vessels of the choroidea are not to be seen, as its pig-

ment is very dark. The pigment of the retina follows the vessels, the latter being visible. In the left eye the change is much greater. The vessels can hardly be seen, are much less distinct than upon the other side; the chorioideal epithelium is lost, to a great extent, near the papilla, (see cut,) but the accumulation of pigment is not so large as on the right side. The left eye is entirely without quantitative sensitiveness to light.

The treatment of retinitis pigmentosa is, in such a case, it is hard to say, hopeless. Perhaps an antiphlogistic and antiplastic treatment might prevent the disease, if administered at the period of commencing choroiditis, but in this stage it is of no use; the material changes—destruction of the retina, excavation of the papilla, and atrophy of the vessels—will continue to progress. The prognosis is, consequently, very doubtful. The sooner the disease is discovered, the greater the chance of relief; but in the present state of ophthalmological science, there is no positive help. Let us hope that there may soon be found a remedy for retinitis pigmentosa, such as iridectomy is for glaucoma.

A Case of Purpura Hæmorrhagica. By W. H. BUTLER, M.D., East Saginaw.

In the March number of the *Buffalo Medical Journal*, for 1859, Vol. 14, p. 592, I reported a case of this disease, which was preceded by a scurfy desquamation, (in that case on the neck,) a circumstance, I think, not generally mentioned by medical writers. I have now to report another case, occurring in a female child, five months old, which commenced in like manner. This child had been brought up on the bottle; the mother, a pale and rather delicate woman, never once having been able to nurse it. It was pale and feeble from birth, no food agreeing with it, but a few days at a time. Its principal sustenance had been arrow-root boiled in water; cow's milk in any form disagreed, and had to be abandoned.

Dr. J. B. White, of Saginaw City, whose patient it was, called me to see it, September 20th, when it was suffering, as it had been almost from birth, with diarrhœa and vomiting, and was also teething. A few days after my first visit it cut its first central incisor on the lower jaw, and the others seemed to be rapidly coming forward. Various remedies were unavailingly tried for the diarrhœa, which vacillated between better and worse, until October 3d, when it was remarked that the child had a scurfy eruption under the right ear, involving

part of the neck and cheek, and that it had purple spots on the feet. I saw the child on the fourth, and had no question of the nature of the difficulty. Spots were on the feet, legs, back, arms, and head.

Dr. White, the day before, as a dernier resort, had lanced the gums over one or two of the teeth, and the cut surface had bled considerably during the afternoon and night; for this tannin and nit. silver had been applied in vain. Blood had also flowed from the vagina. At the time of lancing the gums, the purple spots had not been observed. Suggested gallic acid internally, with perchloride of iron to the gums, brandy and such other nourishment as had been used, rice-water, corn starch, &c. It was impossible for the child to keep anything down more than a few moments, and only by the most assiduous care of the mother was it kept alive; for to this source we must attribute its lengthened existence. Death came October 7th; it was then five months and two days old. We were not permitted to make a post-mortem to determine whether the spleen or kidneys were affected, as in other cases, but we noted externally spots on both feet near the ankle, an inch or more in size; these were of blue, with a purplish tinge. Quite a large one across the back by the shoulder-blades, another near the hips; the centre of the latter had a bright-red look. The abdomen was thickly interspersed with pale, freckly-appearing spots, from the size of a pin's head to an eighth of an inch in diameter. There were also spots on the left side of the head and under right knee. The spots of effused blood were rather limited in number, and none were of much extent. It has never been my lot to see so peculiar a corpse; it had the cold, bloodless look of the whitest marble; even the margins of the lids and lips had the same white look that strikes you as the most unnatural part about a marble statue. Every portion, save the occasional spots, bore more the look of art, than either animate or inanimate human flesh.

A Case of Dislocated Os Humerus, of Eleven Years and Ten and a Half Months, successfully reduced. By WM. H. HUBBARD, M.D., Gravesend, L. I., Kings County, N. Y.

Mr. Edward Tunstall was born September 8th, 1787, at Reinford, England; was injured in September, 1848, on the Liverpool and Manchester Railroad, by falling on the platform of Hayton Station. Having for a long time been afflicted with rheumatism in the shoulder, no attention was given to his case, and without professional advice he re-

mained in this state, and came to America in 1856, and on the 4th August, 1860, I was called to visit him, and prescribe for him, for an attack of *pneumonia*. During my investigations, I discovered that the shoulder-joint was dislocated upward and inward, under the clavicle, and upon inquiry found the particulars as above stated. I advised the old man to have it reduced, as his arm was almost useless; he had kept the shoulder-joint without motion, nearly the whole of this long time, by use of a sling; he finally consented, and on the 5th August I made the trial with Jarvis' Adjnster, and succeeded in reducing the bone to its natural position, to the joy of himself and friends, and to my great satisfaction. It is now nearly six months since the reduction. He has the use of his arm as well as ever, except he says it is not as strong as the other. His residence is with his son, in the village of Greenfield, near Flatbush, Kings County, N. Y.

Transactions of the Medical Society of the County of Kings.

1860. JANUARY.

On Veratrum Viride. By DR. OTTERSON.

I do not propose to read a disquisition upon the *veratrum viride*, but simply to call the attention of this Society to this article of the *materia medica*, for the purpose of opening a discussion and eliciting the experience of its members upon its use, and at the same time take the liberty of making a few suggestions for its practical application.

A few years ago, when the paper of Dr. Norwood was first published, and the article came to be prescribed and canvassed among us, many of our physicians and most of the apothecaries supposed reference was had to the ordinary white hellebore, which has long been known in our shops, and in works upon *materia medica*.

The *veratrum viride* is not the white or European hellebore, furnished by the mountainous districts of the continent; but is the American hellebore, and is found in swamps and low grounds from Maine to Georgia; it is on this account sometimes designated swamp hellebore. In the United States Pharmacopœia and Dispensatory it is called *veratrum viride*, and by that name it is now familiarly recognized.

This article has never been used in the regular practice to any extent, although Prof. Tully, of Yale College, New Haven, had been in the habit of prescribing it in his practice, and recommending it in his lectures, many years ago. In the August number of the *American*

Journal of the Medical Sciences, 1835, Dr. Charles Osgood, of Providence, R. I., published an account of his investigations and experiments with it, his attention having been called to it by Prof. Tully; still it received little or no attention from the profession at large, until the papers of Dr. Wm. C. Norwood, of Cokesbury, S. C., appeared about the year 1850.

That gentleman had been using it for several years, and his papers on the subject aroused the attention of the profession to what many practitioners, and myself among the number, considered a remedy of great importance, as well as power. The best mode of prescribing the *veratrum viride* is in tincture; and as Dr. Norwood's preparation is now in the market, for the sake of uniformity, and while it is comparatively a new remedy, I should recommend that it be always prescribed. Its effects upon the system are generally prompt, certain, and of such power as not to be entirely void of danger. In its operation as well as in its nativity, the *veratrum viride* differs from the *ver. alba.*, in that it does *not*, like the *alb.*, produce catharsis, which is the principal operation of the latter; on the contrary, it is quite promptly emetic, and not cathartic at all. But its chief action, and that which gives to it its remedial value, is its wonderful control over the the circulatory and nervous systems. It possesses in a pre-eminent degree the power of calming nervous excitement, and reducing the force and frequency of the heart's contractions.

It is indicated in all that class of sthenic diseases where prompt and persistent sedatives are required; and has the advantage over the lancet, in that its effects can be continued by slight repetitions, without reducing the vital powers, as would the same repetition of the lancet. It is preferable to *digitalis*, in that it is more prompt and certain, and has not yet been found to possess that cumulative property which constitutes one of the dangers of, and objections to, *digitalis*. It is preferable to antimony, in that it does not produce such violent enteritic irritation and griping diarrhoea, while as a sedative it is considered by many superior; and as an *expectorant*, fully equal to the antimony; its diaphoretic properties are about the same; in its local effects, it somewhat resembles this drug, as, when applied to the skin, it produces heat and irritation, though not such an eruption as will the antimony. The same may be said of its effects upon the alimentary canal. Hence it is contra-indicated when any gastric or enteritic irritation exists. I will now, in as few words as possible, introduce this new friend to a place in the society of those old and long-tried ones, upon whose virtues we have been so long accustomed to rely. Nor have I

any doubt that the addition will be found both pleasant and profitable.

I would recommend Norwood's tincture to be prescribed, in preference to Tilden's, or any other fluid extract, because I think it likely to be more uniform in strength, and hence in its effects.

It is adapted to all diseases requiring the action of the heart and arteries to be controlled, except, as above stated, those attended by gastro-enteritic irritation.

In the latter stages of disease, where the rapid action of the heart is consequent upon the progress of the disease, it should not be employed; such as the latter stages of fevers, when there are nervous symptoms and excessive cardiac action, attended with much prostration.

I think the doses recommended by Dr. Norwood, and some others, too large to commence with, particularly by those unaccustomed to prescribing it, and would rather advise them to commence with half the quantity, carefully observing its effects until they become familiar with them, and their own experience will be their most reliable counselor.

I have used it myself in pneumonia, pleuritis, acute rheumatism, inflammatory croup, iritis, puerperal peritonitis, and nervous palpitation of the heart, and have occasionally added a few drops to expectorant mixtures, where the cough was produced or attended by bronchial irritation, which seems to be extended to the minute vesicles, and the expectoration difficult and albuminous in its character; and I must say, I consider it a most excellent addition; in its administration I have seldom commenced a case with more than three to four drops, repeating it in two hours, and then adding by one drop, at each repetition, or diminishing the quantities, and lengthening or shortening the interval as circumstances might demand. I have generally found a much less quantity to bring down the pulse as low as I required, than that mentioned by Norwood, and some others. When emesis is once produced, the pulse generally comes down sufficiently, the skin softens, or a profuse perspiration breaks out, and the great point is attained. This, as before stated, is easily continued by the occasional repetition of the remedy in very much diminished doses, varying, of course, as with all other medicines, according to the susceptibility of the patient. When emesis is once produced, I find two or three drops every hour or second hour control the symptoms which indicated its administration.

Reference has been made to the *power* of the *veratrum viride*. It sometimes occurs that its operation is active beyond anticipation, and

excessive emesis and prostration, even it may be to an alarming degree, are produced. This may be immediately counteracted by the administration of stimulants; a little weak brandy and water with a few drops of laudanum in it, or a few spoonsful of camph. julep with laudanum, answer the purpose. I have never seen a case requiring carb. ammon., although it is advised. Sinapisms to the stomach are useful addenda to the treatment. In excessive emesis anodynes seem to be the antidote, and laudanum or syrup morphia are always at hand.

I have made this imperfect and disjointed sketch, as at first stated, in order to elicit the experience of such as may have prescribed this remedy, and with a view to bring it to the attention of those who have not. Not that I consider our pharmacopœias deficient in the number of remedies they present; by no means; and yet I think new remedies of undoubted virtues should find there a place; notwithstanding they may be new to the great majority of our members. I presume the administration of this is new. At the South it is in extensive use, and highly prized, and by those who pretend to prescribe vegetable remedies only; it is at once in combination, their lancet, their digitalis, and their antimony; with them it is *tria juncta in uno*.

While I hope I may not be accused of being carried away with a *new* thing, and making of it a hobby, which I am very positive I do not, I would yet recommend, as thousands have done before me, in every pursuit of life, that good old Scripture doctrine, "Try all things, hold fast that which is good."

FEBRUARY.

Treatment of Gonorrhœal Epididimitis by Incision of the Tunica Vaginalis Testes. By JOHN G. JOHNSON, M.D.

It has often been remarked that affections of the mamma in the female breast, and of the testes in the male, are the source of more anxiety to the patient, in proportion to the danger attending them, than diseases of any other organs. Prominent among them, in its claim on the city practitioner, stands gonorrhœal epididimitis, both from the frequency of its occurrence and the unfortunate sequences that may result from it.

Few diseases are attended with more excruciating pain. In none are the directions of the physician more frequently disregarded, from the patient's desire to avoid exposure; while the detention from business caused by the ordinary methods of treatment is a matter of no slight importance, occurring, as the disease frequently does, in the midst of the busy season, when hours are of more value to the patient than days at other times.

There are graver matters than these, however, which should be considered in determining the treatment. The destruction of the virility of the organ, abscess of the testes, strumous degeneration, and even cancer of the testicle, may result from gonorrhœal epididimitis; and other things being equal, in proportion to the length and severity of the attack, is the probability of their occurrence. These sequences are so well established by the ablest authorities that it is hardly necessary to quote them. Ricord says, "The gravity of the affection is only in proportion to its complications. Thus, in scrofulous individuals, it may be the accessory cause of the development of tubercular sarcocoele, which, in Germany, has been wrongly considered a direct consequence of gonorrhœa virulenta, so called.

"In a cancerous diathesis it may be followed by cancer of the testicle; and in patients already affected by constitutional syphilis, it may occasion syphilitic sarcocoele."—(Ricord's Hunter, Am. ed., p. 96.)

Curling says, "The most common cause of atrophy of the testes is the disturbance of its organization consequent upon inflammation. As the inflammatory process ceases, the enlarged gland not only becomes reduced to its original size, but it sometimes slowly and steadily diminishes, till at length very little vestige of it remains. Mr. Hunter has related three cases in which the testicle decayed in this way. I have met with two instances of atrophy arising from this cause, and there are few surgeons of experience who have not witnessed cases of this kind. Wasting is more liable to occur after inflammation of the body of the gland, than after consecutive inflammation, in which the epididimis is the part chiefly involved."—(Curling, p. 30.)

Miller, in his Practice of Surgery, thus refers to this fact: As the complaint yields, the discharge may be expected to appear at the orifice of the urethra. Very frequently resolution is incomplete; hardness and swelling remain in the epididimis. These require active perseverance; local discutients and iodide of potass. may be useful internally. In some instances, resolute absorption is not only rapid; the gland, after regaining its normal size, continues to diminish, and may ultimately dwindle down to a mere shred, wholly destitute of its proper function.—(P. 566, 3d Am. ed.) Abscesses sometimes form; when this does occur, Curling says, "When inflammation terminates in suppuration, owing to the density, thickness, and low organization of the tunica albuginea, the matter is so slow in making its way externally, that it generally burrows in various directions, producing numerous sinuses throughout the gland, and disorganizing its delicate structure."—(P. 283.)

Tubercular degeneration of the testicle may be a sequence. Ricord says: "After gonorrhœal epididimitis, it often happens that the epididimis remains engorged and indurated, or, at least, hypertrophied; as Hunter remarks, it generally does no harm, but, under some circumstances, this continued abnormal development is due to a strumous diathesis, and is only the prelude or exciting cause of tubercular sarcocoele. Indeed, tubercular sarcocoele succeeds gonorrhœal epididimitis so frequently, that in Germany this tubercular affection is considered a specific consequence of gonorrhœal virus. This again is a mistake; tubercular degeneration in this differs in no respect from what it is under any other circumstances."—(Ricord's Hunter, p. 159, 3d Am. ed.)

Both vasa deferentia may become obliterated and produce sterility as a consequence of gonorrhœal epididimitis, as is shown by the researches of M. Gosselin.—(Idem.)

Neuralgia of the testes may result. Curling, p. 409, says: "In several cases it has succeeded an attack of orchitis, continuing to distress the patient after all inflammation has subsided, and recurring or increasing as he gets out of health."

Sir Benjamin Brodie gives the following account of the dissection of a testicle which had been attacked with inflammation from a gonorrhœa twenty years before: "It was smaller than the other testicle, and part of it was considerably indurated. On making a section of the gland, he found that about two-thirds of the tubuli testes remained in their natural condition, while the remainder had been converted into a fibrous substance, having the consistence, but not the fibrous structure, of ligament. In these cases the fibrinous matter effused in the cellular tissue, not having been absorbed after the cessation of inflammatory action, had occasioned partial atrophy of the proper structure of the organ, and been converted into the dense tissue above mentioned." In old cases the epididimis acquires the density and consistence of cartilage, and sometimes even of bone.

These changes are rarely found without the presence of old adhesions, obliterating partly or completely the sac of the tunica vaginalis.—(Curling, pp. 285 and 286.)

The results obtained have been far from satisfactory, if we are to judge from the variety of remedial means proposed. Cooper, in his Surgical Dictionary, says: "Rest is the best remedy, and the horizontal position of the body is the easiest; at all events, the testicle must be well suspended. The case is to be treated as inflammation in general, by bleeding and purging, and applying fomentations and poultices. James on Inflammation, p. 164, on the contrary, recommends

cold applications. Vomits have been recommended by Hunter and others. Curling recommends rest, elevation of the nates to favor the return of the blood, evaporating lotions, and has seen most beautiful results from the nausea produced by tartar-emetic, continued for 30 hours. He approves of a smart purge, absence of animal food, and tartar-emetic, $\frac{1}{4}$ grain every 3 hours; and when the tunica vaginalis is involved, he recommends mercury, which has been found so valuable in serous inflammations. The application of from 8 to 30 leeches is recommended by most modern authorities. The severest method of treatment, and, unfortunately for the patient, very generally adopted, is that advised by Prof. Fricke, of Hamburg, of compressing the testicle by straps, evenly and firmly applied over its whole extent. This he advises as a primary measure, and the straps to be reapplied every day; the average duration required for this method of treatment being 8 or 9 days. Other surgeons approve of this method of compression, when the violence of the inflammatory action has abated. The introduction of venereal matter into the urethra has also been absurdly recommended, under the supposition that the orchitis was the result of metastasis, and to bring back the discharge to the urethra.

Bromfield recommends irritating the urethra with bougies for the same purpose.

M. Velpeau first proposed to evacuate the serum by single or multiple punctures. M. Velpeau's method of treatment is as follows: The lower and posterior part of the tumor, where the testicle is usually situated, is grasped by the left hand of the operator, while with the right he plunges a lancet perpendicularly into the bulging mass of the fluid, above and in front. One or more incisions are made, which are followed by a jet of serum, or a few drops of blood.

In an interesting lecture upon this subject, delivered at La Charité, with statistics of thirty-seven cases of gonorrhœal epididimitis, in all but seven of which the amount of fluid was marked, M. Velpeau sums up his treatment as follows: The treatment of these patients has consisted in the employment of rest, cold, suspensories, mercurial inunction, and either single or multiple punctures with a lancet, abstaining from leeches. Punctures, by giving issue to the fluid, give great relief to the patient, certainly abridge the duration of the disease, and exempt from inconvenience.—*British and Foreign Medico-Chirurgical Review*, 1857.

The operation of incising the body of the testicle was first introduced by J. L. Pettit, and revived by Vidal de Cassis. It is performed in the same way as that of M. Velpeau; both in the orchitis

and in simple epididimitis. The incision through the tunica albuginea is from one-half to three-quarters of an inch. Vidal de Cassis has performed it, without any bad result, over four hundred times. He regards the result as in the highest degree satisfactory. It removes the strangulation, relieves the excessive pain, and acts as a powerful antiphlogistic in reducing the swelling.

Pathology should be our guide in determining the treatment of these cases. The lesions are such as we might expect to find as a result of inflammatory action. Curling says: I have twice been able to inspect a testis affected with (gonorrhœal) secondary orchitis, and the following description of the pathological appearance is drawn up from those examinations and from the account of the dissection of two testes affected with gonorrhœal inflammation, recorded by M. Gaussail. The tunica vaginalis is more or less distended with lymph or albuminous matter, infiltrated with reddish serum, which form loose adhesions between the opposed surfaces of the membrane. These adhesions are so slight as to admit of being easily broken down with the finger. The membrane is injected with a multitude of red vessels, which ramify in various directions, and form a compact network; at a later period vessels may be traced proceeding from the free surface of the tunica vaginalis to the false membrane forming the adhesions. The volume of the testis appears very little if at all increased; the great volume of the tumor being occasioned by effusion into the serous sac.

When cut into the gland it appears somewhat darker than natural, from a congested state of its vessels. The epididimis is enlarged to twice and sometimes thrice its natural size, and feels thick, firm, and indurated. This enlargement is produced by the effusion of a brownish deposit into the cellular tissue, between the convolutions of the duct. The coats of the vas deferens are thickened, and the vessels ramifying near them, injected sometimes along the whole length of the duct. Albuminous deposit is found in the cellular tissue around the tortuous part of the vas deferens and tail of the epididimis, which frequently forms the bulk of the swelling in these cases.

M. Ricord has presented to the Academy of Medicine, of Paris, specimens, and his views of the pathology are as follows:

The epididimis is at first engorged, and then the vasa deferentia. If it is at all severe or constitutional, it becomes complicated. The most common complication is undoubtedly effusion into the tunica vaginalis, or hydrocele. This effusion, which M. Rocheux believed to be the principal affection, is sometimes due to a transparent, serous exhalation, of a pale-yellowish color, as in passive dropsy, caused by obstruc-

tion of the circulation, and sometimes on the contrary; and these are the rarer cases; it is the consequence of true inflammation of the serous membrane, and presents all the shades of color of pus, false membranes, and diluted blood, which are generally met with in serous inflammations. These differences, which may be already distinguished by the greater or less transparency of the effused fluid, are placed beyond a doubt in those cases in which the fluid is evacuated by puncture. The most common complication, next to the one just mentioned, is the engorgement of the cellular tissue beneath the scrotum and around the cord. The skin in that case is no longer movable on the subjacent parts. The vas deferens is lost in a solid cord, the component parts of which cannot be distinguished, and which is sometimes so large as to be strangulated by the tissues which it traverses.

These engorgements, which, under some circumstances, are only œdematous, are sometimes decidedly inflammatory, and may terminate in suppuration and abscess; and finally the skin may become involved, and take on œdema and erysipelas. The body of the testicle is certainly one of the parts most rarely involved. Whenever the testicle is swollen by inflammation and there is true orchitis, the pain is intolerable, in consequence of the constriction exercised by the tunica albuginea. When suppuration supervenes, it most frequently takes place in the subcutaneous cellular tissue, next around the epididimis, and next in the body of the testicle, in true orchitis.

Pathological anatomy has confirmed all that careful observation at the bedside of the patient had anticipated. In simple cases, the epididimis alone is affected, of which I have shown cases to the Academy of Medicine. I have found the tunica vaginalis containing fluid or empty, presenting pus or false membranes. When the testicle presented any changes, it was shown that they commenced near the epididimis, and that they consisted of an effusion of plastic lymph, as Sir Astley Cooper has so well shown, together with compression or more or less complete obliteration of the vasa deferentia; but in every case, the normal elasticity of the organ was lost. MM. Gausail, Rouchoux, and Velpeau have all presented similar pathological facts.

The lesions, which all authorities agree are the most common, are, 1st, serous effusion into the tunica vaginalis; 2d, congestion of the epididimis, followed by the effusion of plastic lymph; 3d, true orchitis.

The method of treatment I prefer is as follows: The testicle should be held in the left hand of the operator, in the same manner as if he was operating for hydrocele. With a sharp lancet, a free incision should then be made through the scrotum, and the tunica vaginalis of the

lower and anterior portion of the testes; and if there is reason to suspect true orchitis, the tunica propria may also be incised. This seems to me to be the most common-sense method that can be adopted. By the division through the scrotum, we have abundant local depletion—the engorgement of the scrotum is relieved, and we have an amount of depletion greater than is obtained from leeches. As the tunica vaginalis is divided, there is usually an escape of a drachm or two of pinkish serum. In other words, you have had a small hydrocele, which has been thus relieved. There is no danger, in dividing the tunica propria, of wounding the testes, for the constriction in true orchitis is so great, that as soon as the tunica propria is divided, its edges recede and the constricted substance of the testicle bulges out. The advantages from this method of treatment are many. 1st, There is an immediate relief from the pain—I have never seen more immediate relief given to a patient with a bone felon—by dividing freely down to the bone, than is that afforded to a patient suffering from acute gonorrhœal epididimitis, by dividing this constriction over that highly sensitive organ, the testicle.

A patient was brought to my office in a carriage, who had fainted in his store from the pain of the epididimitis. He could hardly bear my hand to touch it. I divided the red, shiny and tense scrotum, &c., through, till the bulging body of the testes was seen in the wound. The bleeding was favored by warm fomentations. At the end of half an hour, the patient gathered up his clothes with an air of comfort which was quite surprising, and walked out of the office with a smile, which showed how great and how immediate had been the relief. If the immediate relief was the only advantage possessed by this method of treatment, it would entitle it to our consideration; but it seems to me to obviate the great danger of those sequences which, we have seen, may result from an orchitis. Thus, in case of atrophy, we find the atrophy was caused by pressure and by the effusion of lymph, which went on till it was organized. That pressure causes atrophy, is shown by the fact that pressure in other cases causes atrophy of the testes. We very frequently find a patient with a large, old scrotal hernia, has atrophy of the testis, that is compressed; the mere weight of the hernial sac and contents being sufficient to produce atrophy of the testis. Again, it is no uncommon thing to find that a patient who has worn an ill-fitting truss for scrotal hernia, has atrophy of the testis from the pressure of the truss. Atrophy of the testis is found often where there is an old hydrocele. The pressure of fatty

and other tumors produces the same result—atrophy of the compressed organ.

Hunter says, "Testicles have been known to waste in cases of rupture, probably from the constant pressure of the intestine. Mr. Bott has given us cases of this kind. I have seen in the hydrocele, the testicle almost wasted to nothing; probably from the compression of the water."—*Ricord's Hunter, Am. Ed.*, 1859. Authorities in abundance could be adduced. They are found in every work that treats of atrophy of the testes, and the fact is too well known to need the collating of authorities.

By this division, you relieve the compression produced by the firm tunica vaginalis, distended as it is, and the still further constriction produced by the tunica propria, and thus obviate the danger from the compression. The effusion and organization of plastic lymph is prevented by this means. The lymph is allowed a free exit before it becomes organized, and by the depletion the inflammatory action is allayed, and the further formation of plastic lymph is prevented. We thus make use of the most efficient means in our power to prevent the occurrence of atrophy of the testicle; namely, by obviating the compression and effusion. It will be remembered that Sir Benjamin Brodie states that atrophy is rarely found without the presence of old adhesions, obliterating partially or wholly the sac of the tunica vaginalis. Is it probable that these adhesions will take place when the inflammation is allayed as rapidly as it is by this means? Again, we are sure of our treatment. If we send our patient home to take antimony for two or three days, or to the druggist's to have a dozen leeches applied, we are not always certain that the fear of exposure will not make him neglect the treatment in the one case, or the expense make him hesitate in the other. If we operate in this way, we are sure that the relief is afforded to the patient, and have the satisfaction of seeing the benefit he derives from it.

Some of the advantages of this method of treatment are, 1st, The speedy relief; enabling the patient, if necessary, to go at once to his work. 2d, It obviates the danger of atrophy and the other unfortunate sequences resulting from prolonged pressure, by removing at once the exciting cause. 3d, The certainty of the treatment.

The only objection that appears to be adduced to this method of treatment is the bugbear one of wounding the tubuli testes. We must remember that Ricord, Velpeau, Vidal de Cassis and I. L. Petit, practice a far more severe method—that of plunging a lancet directly into the body of the testicle. Vidal de Cassis states that he

has performed this operation 400 times without bad result. If, then, incision into the body of the testicle can be made with such impunity when it is inflamed as it can be, unless the veracity of such authorities as Velpeau, Ricord, Vidal de Cassis and I. L. Pettit be impugned, there certainly can be no danger in the slight cutting of the substance of the testes, that might be produced by this operation.

The advantages over all the ordinary methods of treatment are marked. A brief comparison of the various methods of treatment with this, will convince most.

Inflammation of the tunica vaginalis is the most common complication; for this Mr. Curling advises the use of mercury, which has been found so valuable in serous inflammations. To say nothing of the rapidity of relief afforded by either method, will the physician injure his patient's constitution willingly, by bringing him under the prostrating effects of mercury, expose him to the risks of salivation and consequent discovery, when so immediate, simple and efficient a remedy can be used as the one recommended in this article?

The treatment by the use of compression is so inhuman that it should be abandoned. When we consider how susceptible this organ is in health—and the susceptibility increased by inflammatory action is so great that the patient can hardly bear to have us touch the testicle without a shudder—that it is proposed to renew the straps daily, and thus to force by methodical compression this highly sensitive organ into a compass smaller than the already too unyielding tunica vaginalis and tunica propria, will allow is a refinement of cruelty which should meet with the disapprobation of every humane surgeon. An esteemed professor, in a lecture on this subject, once remarked that his first impulse, when he saw a surgeon thus strapping an inflamed testicle, was to seize the surgeon by his testes, and by this practical demonstration of the cruelty of the treatment, teach the surgeon humanity.

Curling disapproves of the compression in the acute stage, and allows it only when the violence of the inflammation has been reduced by tartar-emetic. Ricord approves of it only in the induration of the epididimis, which often remains.

As far as my experience goes, if the tunica propria is opened at first to allow free evacuation of the effused serum, the testicle well supported with a suspensory bandage, and kept in a warm and moist condition by the use of a dossil of lint, wet with tepid water, wrapped around it, and covered with oil silk, there will be very little need of

resorting to methodical compression to promote the absorption of effused lymph.

Even in those cases in which lymph is effused, is there not more danger of producing atrophy of the testes by compression than would result from allowing the lymph to remain?

If we consider the delicate structure of the tubuli testes and the liability to decay, which John Hunter says is more apt to occur in the testes than in any other organ, do we not run a greater risk of producing atrophy by compressing this delicate structure than would occur without the use of the straps?

This method is far more efficient and rapid than the use of leeches; and at the same time, we avoid the irritation resulting from leech-bites; the itching from these is sometimes so great that the patient not unfrequently produces troublesome sores by scratching them.

Again, many patients feel a delicacy in going to a leecher's and sitting till the leeches have finished drawing.

As to the prolonged use of tartar-emetic, there are few of us who would willingly submit a patient to the prostration and continued nausea which this medicine produces, when means so simple and so efficient are at hand.

I have too vivid an impression of the deadly nausea produced by this remedy to wish to give it the full trial. Those of us who, in our early childhood, have had this remedy freely administered as our anxious physician stood by us, in fear of impending croup, as dose after dose was forced down us, have too thorough experience of that word nausea to wish to place our patient in this condition and to continue it for thirty hours at least.

To those who have not this experience, and with whom this method is a favorite treatment, I would recommend the course pursued by Profs. Saunders and Bard, for testing their materia medica, as related by the venerable Dr. Francis; Bard taking the antimony, and Saunders noticing the effects. If, after this experimental trial, antimony is a favorite remedy, they are welcome to use it in these heroic doses.

Venesection has been recommended, but it is so rarely employed as to hardly need alluding to.

By this means we have, then, immediate relief of the constriction and danger of atrophy, &c., and an immediate relief from the pain, enabling the patient to return immediately to his business, if necessary, and thus we avoid the risk of exposure.

The induration rapidly subsides, and the wound closes readily.

MARCH, 1860.

Case 1.—DR. J. C. HUTCHISON presented a specimen of *Comminuted Impacted Fracture of the lower end of the Tibia*, with fracture extending into the joint, which was not detected until after amputation, with the following history:

Patrick ———, intemperate, 22 years of age, was run over by a city railroad-car, on 10th March, which produced a compound fracture of the ankle-joint. He was removed to the Brooklyn City Hospital, where his injury was examined with care by Drs. Minor, Enos, KISSAM, and HUTCHISON. The astragalus was found to be comminuted, the fibula fractured, the soft part greatly lacerated, and although the finger was readily passed into the tibio-tarsal articulation, the fracture of the tibia was not discovered; reaction had occurred sufficiently to allow amputation of the limb below the tubercle of the tibia, forty-one hours after the accident. On examining the amputated part, the soft tissues, as is usual after such accidents, were found lacerated and contused much higher up than was apparent before the operation. On examining the tibia, it will be seen that the lower third is broken into a number of fragments, which are so impacted that little or no displacement has taken place; the fracture has also extended into the joint.

The specimen is one of great interest in a medico-legal point of view, as indicating that an impacted comminuted fracture, *involving a joint*, may exist without being detected by careful examination. Such an injury would in all probability be followed by ankylosis, if the limb was sound at all, which would make the surgeon liable to censure, or a suit for malpractice.

Case 2.—In connection with this case, DR. HUTCHISON mentioned another case of railroad injury, for which he had performed amputation within a few days, for the purpose of *showing that the intervention of a joint will limit the lesion of all the tissues, however severe, notwithstanding the close proximity of the injury to the articulation*. The patient, a boy, about 20 years of age, had his right leg run over by a Long Island railroad-car, which, with the exception of a small piece of integument, completely separated it from the body at the tubercle of the tibia. The bones of the stump were denuded nearly to the knee-joint, and a portion of integument was lost for a considerable distance above the knee posteriorly. He was removed to the Brooklyn City Hospital, and amputation was performed when he had reacted, (six hours after the accident,) at the middle third of the thigh; the patient died on the same day. On examining the amputated part, it was

found that the soft tissues above the knee were entirely free from the laceration and contusion which always accompany such accidents, and extend for a considerable distance above the apparent limits of injury.

This case, therefore, proves that a joint may limit the destruction of soft tissues by railroads and heavy machinery, &c., so as to permit amputation to take place immediately above it, or even at the articulation, if there be sufficient integument to cover the stump.

DR. MINOR reported *three cases of Varicose Veins, treated by the Injection of Solution of Persulphate of Iron.*

The first case was of the veins of the scrotum, in which both the superficial and the deep-seated veins were implicated. The superficial veins were *first* injected, with the effect of their complete obliteration. Subsequently the same operation was performed on the deep-seated veins. This was followed by the formation of a tumor of coagulated blood, which ulcerated out. The operation was successful.

The other two cases were of the veins of the legs, in which the operation was attended with like success, except that the coagulum was not ulcerated out. One of the cases is cured, and the other is convalescent.

The peculiar advantage in the use of this agent is, that *iron* is not inimical to the human tissues, and excites *adhesive* inflammation. It thus obliterates the vein without constitutional, and with insignificant local, disturbance. The solution in one of the cases was very weak and small, consisting of *two drops* of a mixture of one part of the persulphate to three of water. The others were a little stronger.

DR. MINOR also related a case of much interest, from the great obscurity and vital importance of the diagnosis.

A woman, on a Wednesday, found a small tumor near the groin, for which there was no known cause. It gave no serious inconvenience, and she stated that she had had a similar tumor in the same place before, but it had gone away of itself. She did not apply for aid until Saturday, and entered the hospital Sunday morning. He found a round, hard tumor, situated below Poupart's ligament, which could be shifted about under the skin. It was painless and solid, and was first thought to be a gland, but excited suspicions of hernia, inasmuch as the patient had vomited previously, although not within the last twenty-four hours. She had a sense of constriction about the waist, the pulse was natural, and there was no prostration.

On a second examination, it was thought not to be hernia, but that

a hernia might lie behind the tumor. He cut down upon it, and came to a peculiar substance, dark-colored, and amorphous, having the appearance of a parenchymatous glandular structure, and thought it might be the inside of an inflamed gland. A director was passed into it, and on opening it, displayed the shining and almost black surface of intestine, which looked at first as if it might be a clot of blood. The stricture was relieved, the gut returned, and the patient recovered.

He came to the conclusion, from the condition of the sac, that it had been thickened by repeated occurrences of hernia, but does not know how to explain the round, dark, granular appearances observed.

MONTHLY SUMMARY OF AMERICAN MEDICAL JOURNALISM.

By O. C. GIBBS, M.D., Frewsburg, N. Y.

Ovariectomy.—In the *N. A. Medico-Chirurgical Review*, for January, Prof. Henry Miller reports a successful case of ovariectomy. This is the third successful case that has occurred in the practice of Prof. Miller. He does not tell us how many times he has operated. In this case, Prof. Miller dressed the wound with the stump fixed exterior to the cavity of the abdomen, as recommended by Spencer Wells. He makes a remark upon this point that is particularly worthy of consideration. "If, when the pedicle is left in the abdominal cavity, the suppuration and sloughing are equal to what I observed on the outside, and there is no reason to suppose that there is any difference, then I am disposed to think that it would be always better to proceed as I did in the present case, for there must be danger when the pedicle is left within the body, not only of peritonitis, but of purulent absorption. The sloughing was not completed until the twentieth day after the operation, when the remnant of the stump was not larger than a cherry, and was retracted within a deep depression, looking like the umbilicus of a newly-born child." It is not every case in which this can be done, because of the shortness of the peduncle.

We do not know as Spencer Wells claims priority in this method of dressing the stump, nor when his first operation of this kind was performed. This method of dressing the stump of the pedicle, so that the discharges shall fall outside the abdominal cavity, is spoken of as Wells' method; but in reported operations by Spencer Wells, made three years ago, this plan is not spoken of. So far as we know, the late

lamented Prof. Ackley, of Cleveland, Ohio, was the first to operate in this manner. In 1855 he thus operated, and Professor John Delamater speaks of the case as follows: "The doctor *conceived* the idea, that if he could place the stump of the ovarian pedicle in such a position that the slough would fall outside of the peritoneal cavity, he should avoid one source of after-accident. He therefore, in dressing the wound, drew the stump of the pedicle through the internal portion of the wound, fixing it in that position, by fixing the ligature by which it was surrounded in a state of tension sufficient to hold the stump in that position." The manner of fastening the pedicle by the *ligature* was probably an error in Dr. Ackley's case. The patient died from internal hæmorrhage, and the Doctor supposed the strain upon the ligature caused it to ulcerate through the pedicle too rapidly, and before the permanent closure of the artery. As the patient died on the third day, we think it is more probable that it slipped off, because of the shrinking of the pedicle and the strain upon the ligature.

About the same time, or perhaps a little later, Prof. Ackley attempted to cure a case without extirpating. "He made an incision through the abdominal parietes into the sac, through which he introduced a tube, which was confined in place for the double purpose of giving vent to all matters poured into, and also to induce suppuration and granulation of, the sac. This case also terminated fatally, though not very suddenly." We have been the more particular to claim originality, in regard to fastening the stump of the pedicle outside of the peritoneal cavity, for Prof. Ackley, because he was our friend and instructor, and he was too modest and retiring to claim anything for himself.

In the *Lancet and Observer*, for January, Prof. E. S. Cooper, of San Francisco, reports a successful case of ovariotomy. This is his third operation and first recovery. He thinks one of his former cases might have recovered had effectual means been taken to prevent hæmorrhage. In this case, the successful one, he transfixed the pedicle at various points with a needle, armed with a strong ligature, which was then drawn tightly and tied. Statistics show that full one-fourth of all the unsuccessful operations have terminated in death through hæmorrhage. It has, doubtless, been the cause of death in many cases where it was not suspected. These facts show the importance of due attention to its ligation. Dr. J. T. Bradford, of Kentucky, says, that portion of the pedicle which is composed of the ligament of the ovary is very elastic, and *in its subsequent retraction is*

apt to slip through the ligature. From this cause, he thinks, many cases of hæmorrhage arise. This will constitute another good reason for securing the stump of the pedicle where it can be seen, in all cases where it can be done.

A new method of treating ovarian dropsy has lately been practiced in London, less dangerous to life, and yet perhaps not less often successful, that it may not be inappropriate to refer to here. In the American edition of the *London Lancet*, for January, Dr. Baker Brown reports three cases cured by *tapping and pressure*. The pressure is made by means of pads and flannel bandages, applied as tightly as they can be borne. The February number of the journal just referred to, which, at this writing, has just come to hand, contains the report of another successful case. The operation was performed and the report made by Emanuel May. He acknowledges his indebtedness to Baker Brown for the suggestion. The cure remained complete for four years, when he lost sight of the case.

Aletris Farinosa.—In the *N. A. Medico-Chirurgical Review*, for January, Dr. J. P. Dromgoole has an article upon this subject. He thinks the *Helonia dioicia*, *star-wort* or *false unicorn-root*, has been too much neglected in medicine. Of its action he says, “It is emmenagogue, tonic, alterant, and slightly stimulating.” “I have used it successfully in the treatment of amenorrhœa, dysmenorrhœa, leucorrhœa, hysteria, chlorosis, and other diseases connected with the organs of gestation, and have found it to be the most effectual remedy I have as yet employed.” “Cases of amenorrhœa of several months’ or years’ standing, which have baffled the skill of eminent physicians, and failed to yield to all known remedies, have proved perfectly tractable upon a free use of star-root. For all female irregularities, I find it to be unsurpassed in its certain and efficient effects.” “If the patient be pregnant, or if there be considerable uterine engorgement, I consider the star-root contra-indicated.” Fluid extracts of this remedy are prepared by Tilden & Co., also by Thayer & Co. Keith & Co. prepare from the root a principle called *Lelonin*, and recommend it as a uterine tonic, and well adapted “to relieve a tendency to repeated and successive miscarriages.”

Diphtheria.—The subject of diphtheria receives more than usual attention in the journals for January, of which the present article is a *summary*. Risking the charge of repetition, we shall endeavor to give, in as few words as possible, the practical import of the papers that have come under observation. In the *Maryland and Virginia Medical Journal*, for the month above indicated, Dr. R. W. P’Anson has

an article on this subject. In the treatment, he recommends, first, an emetic of salt and water, or ipecacuanha, to be repeated as occasion may require, to clear the throat. After the emesis, he would move the bowels with oil and turpentine, and subsequently keep them open with rhubarb, should medicine be required for this end. "A stimulating and supporting plan of treatment should now be adopted, such as camphor and quinine—1 to 5 grains each." . . . "Capsicum, used in combination with the powder of camphor and quinine, will be found an excellent remedy." In cases complicated with pneumonia, "the main reliance must be placed in *repeated* blistering, both in front and behind the chest. At this stage great advantage will be derived from the use of spirits of turpentine, together with stimulating expectorants, as decoction of seneca and syrup of squills."

As local remedies, he recommends nitrate of silver, 20 gr. to the ounce of water, to be applied only once a day. He mentions a variety of gargles, but none of these, he thinks, should be used more than three times a day. We have ordered a saturated solution of common salt to be thus used, and to be repeated every hour or two, with decided relief. It clears the mouth and throat of the adhesive and nauseous secretion better than anything else we have tried. After the removal of the diphtheritic membrane with a strong solution of nitrate of silver, the salt and water, thus applied, will prevent any extensive subsequent formation. In pneumonic complications, he would advise mercury until the gums become tender.

He says he has treated over thirty cases, with but two deaths. We should consider the mercurials objectionable, but then his experience is satisfactory. He says nothing of whiskey as a stimulant. In our experience, as has been stated in former *Summaries*, we have regarded it of the first importance. In about twenty cases, we have had two deaths, and both of these refused the stimulant. All the others expressed a confidence that the milk punch or egg-nog was staying them up against the excessive feeling of prostration.

In the *Berkshire Medical Journal*, for January, Prof. Wm. H. Thayer has an article, of thirty-eight pages, upon this subject. He shows a thorough acquaintance with the literature of diphtheria, and enters quite fully into its history. We shall deal only with his treatment, which is not dissimilar from that previously advised by other writers. He says, "Diphtheria is clearly not a self-limited disease; and in order to make treatment effectual, it must be begun at an early period." Of local means, he gives his preference to the

nitrate of silver, and that in nearly or quite full strength. "I prefer to apply the stick to the exudation, and a solution of 2 dr. to 1 oz. to the surrounding mucous membrane for the early applications, to be omitted or diminished as the disease begins to yield." A variety of chlorinated mixtures are spoken of, as adapted to the milder cases, or the convalescing stages. Of general treatment, muriated tincture of iron, chlorate of potash, quinine, turpentine, and alcoholic stimulants, are recommended. "Chlorate of potash has an advantage over the tincture of the sesquichloride of iron, as an alkali—in its resolvent effect on the fibrin of the blood, and hence a probability of its diminishing and arresting the exudation. In our experience, this statement has hardly been borne out. We think we have seen the most positive results from the tincture of iron. "Besides quinine, chlorine, or turpentine, diphtheria requires alcoholic stimulants. The flagging powers of life need frequently repeated excitants to sustain them against the steadily depressing influence of the disease." These, he thinks, can usually be commenced with as early as the second or third day. We have frequently commenced with them on the first manifestation of the disease, and are confident that we have seen those severe neuralgic pains, so common in the outset, yield to a full dose of hot sling. The absence of surface heat he regards as an indication for the commencement of the stimulant, and adds, "but we might, without hesitation, say that the presence of the disease is alone a sufficient indication."

In one regard Prof. Thayer and Dr. P'Anson are at variance. Prof. Thayer says, "I cannot avoid thinking it especially ill-judged to mercurialize a patient—if wise at any stage—at the somewhat advanced period at which the croupal symptoms usually appear in diphtheria, as the peculiar adynamic condition also is approaching, if not already begun, which must be hastened and aggravated by a mercurial course." As in typhoid fever, so in diphtheria, he thinks a tongue dry and black requires *turpentine*, and not calomel. We have used the turpentine in about half of our cases, in all that were protracted, and at any time gave a dry and red, or black tongue, and always with an evidence of improvement.

In an article of twenty pages upon diphtheria, by Dr. C. H. Cleveland, the subject is discussed with some novel views. As his treatment is somewhat different from any previously given, we subjoin it in substance. Dr. Cleveland thinks *alkalies* are of the first importance, and recommends the *bi-carbonate of soda*, to be given in from *one to ten* grains, according to the age of the patient, every half hour,

or every hour. As a local application, he prefers a strong solution of common salt. We make one quotation: "A gargle, composed of a very strong solution of common table salt, if the pellicle is not yet formed, will produce an osmotic flow of fluids through the epithelium, and thus cause the fauces and throat to be too moist to allow a pellicle to be formed. If taken early in the attack, repeated very often, at the same time that plenty of soda is taken internally, most cases of diphtheria will pass off without any appearance of the membranous exudation. Without doubt, by thus preventing the formation of a pellicle, many cases of genuine diphtheria have been made to remain so mild in their action, that even closely observant physicians have been led to suppose the disease was simply an ordinary pharyngitis."

In the *Nashville Journal of Medicine and Surgery*, for January, Dr. J. C. Calhoon has a short article upon this subject. He says that last fall the disease prevailed in an aggravated form. The first few cases he treated "in the usual manner, with alterative doses of mercury, an occasional emetic, and nitrate of silver to the throat," and all died. (Dr. Calhoon should know this is not the usual treatment.) "But since we have adopted the following treatment, not a single case has terminated fatally, so far as I have heard:

R.—Two table-spoonsful of fresh tar.
The yolk of an egg.

S. Spread on a piece of coarse cloth, cover it with a piece of old muslin, and apply to the throat. This plaster should be removed once in eight hours. If the subject is an adult, direct him to use a strong decoction of cayenne as a gargle, every two hours. For children a weaker decoction should be used, and applied to the throat with a mop. This, together with keeping the bowels in a soluble condition, will as certainly cure diphtheria, as quinine will arrest intermittent fever. The efficiency of the above treatment has become so generally known in this locality, that physicians are seldom called to diphtheria patients."

This statement, in our judgment, is quite too sweeping. We are not prepared to believe that an external application to the throat will cure a constitutional disease, of the severity which diphtheria frequently assumes, *with that certainty with which quinine will cure an ague!*

In the *Medical and Surgical Reporter*, for January 5th and 12th, Dr. W. Pepper has lectures upon diphtheria. We subjoin the more important points of treatment. "I am in the habit of prescribing the muriated tincture of iron, in fifteen-drop doses, four or five times a day, and sulphate of quinia in doses, so that five or six grains shall be

taken in the course of the twenty four hours. At the same time, to sustain the strength, I give wine and water, wine whey and porter, and when necessary, from the great prostration present, I employ the oil of turpentine, the same as in cases of enteric (typhoid) fever. In regard to the use of mercury, he thinks there are some cases of a sthenic character that may be benefited by the use of mercury, under certain conditions; but in adynamic cases, he thinks there is no doubt of its impropriety. He also uses the chlorate of potash. As to local remedies, he thinks powdered alum, or borax and sugar, preferable to nitrate of silver in substance. He thinks there are many cases the local symptoms of which might have remained mild, but for an *aggravation* by the use of the nitrate of silver. He occasionally uses the nitrate of silver, but in *weak solution*—under twenty grains to the ounce. Where emetics are indicated, he prefers alum with ipecacuanha.

In the *St. Louis Medical and Surgical Journal*, for January, Dr. S. T. Newman has an article upon diphtheria. He concludes his paper with a letter from Dr. J. W. Bright, of Lexington, Ky., in which a slight modification from the ordinary treatment is advised. Dr. Bright commences the treatment with a gentle purgative, and afterwards the bowels are kept soluble by means of oil and turpentine. The membranous exudation he removes with a fine sponge, and applies a solution of nitrate of silver, 40 grs. to the ℥j., or the sulphate of copper, ℥j. to ℥j. of water, once a day. For general treatment: "I give the muriate of ammonia in full doses, say, to a child eight years old and upward, 10 grains every two hours, (in solution,) and ten drops of the sesquichloride of iron in the intermediate hours; and these are not to be omitted for thirty-six hours; then rest four or five hours, and give them again in like manner. Continue this treatment for four or five days, according to circumstances." * * * "The cure should be completed by the use of tonics; I have found beoberine the best. Diet nonrishing. I have treated three hundred and thirty-four cases after this method, *without the loss of one.*" The result is quite satisfactory.

In the *American Medical Times*, for January 19th, Dr. E. W. Spafford has a short article upon the treatment of diphtheria. He says, "I have lost none to whom I was called within forty-eight hours after the attack. My first business is (if it has not been done) to relieve the stomach and bowels of their morbid contents by the use of a gentle cathartic; apply *tr. iodine* to the neck, three times per day, and with a sponge probang, alternately apply a solution of chlorate of potash and nitrate of silver to the ulcers in the throat; sponge the body with

diluted nitro-muriatic acid; give gum-water, beef-tea, wine, quinine, and iron, as the case may require. Tonics are indispensable. If neglected or too sparingly used, alarming debility may ensue, the surface of the body become colorless, muscular power in a very short time lost, and the patient soon ceases to breathe.

"I have been much gratified at the beneficial results growing out of the use of *nitro-muriatic acid* to the surface. It not only acts as a counter-irritant, but as a tonic. Where I have had opportunity to use it early in the disease, I have not witnessed the debility, the flabby, soft condition of the muscles, or colliquative sweats, which so often lead us to an unfavorable prognosis."

In the *American Medical Times*, for January 26th, Dr. Jonathan Kneeland has an article upon this subject. In Onondaga and vicinity diphtheria has prevailed somewhat as an epidemic since July last. About *eighty* cases have occurred, and *ten* deaths. Of these eighty cases, Dr. Kneeland has treated seventeen, all of which recovered. We shall make a few extracts from his treatment, and thus give what is peculiar. "In giving briefly the treatment I found most successful, I would claim no other merit but that of having somewhat early learned that we must at the onset sustain our patients by specific constitutional remedies, and not rely too much on local treatment."

The bowels were first emptied, in Dr. Kneeland's course, and then the patient put directly upon the chlorine mixture:

℞.—Chlorate of potash, 3ij.
Hydrochloric acid, (dil.) 3ij.
Water, 3viiij.

sweetened to the taste, giving from a dessert-spoonful to a large spoonful, according to the age of the patient." To this a small amount of morphine was added in some cases; and if muriated tincture of iron was considered advisable, it was given in connection with this mixture, in which connection he thinks it is better borne than when given alone. Quinine, in large doses, he considers all-important: "In no disease have I seen quinine so well borne." Like almost every observer, Dr. Kneeland found "good broths and food of easy assimilative capacity are of essential service." He says, "I have found nitro-muriatic acid, (equal parts of each acid,) given in doses of six or eight drops in water, and taken after food, well borne in some patients, who did not bear either the iron or chlorine mixture well." * * * "Alcoholic drinks in aid of quinine, general stimulants and nourishing broths, seemed useful in some cases. But in some, we found that the free use of 'good sound cider,' as the farmers call it, agreed better than ardent

spirits." We have more confidence in appropriate stimulants than anything else in diphtheria. Upon this subject we have frequently expressed our opinion. A few days since, a gentleman called upon us for advice, in regard to a sore throat and general prostration of the system. On examination, we found the fauces soft, palate and roof of the mouth presenting that erysipelatous redness peculiar to the first stage of diphtheria. His business was such as to render it important that he should keep about. I advised him to use all the rye whiskey he could and not become intoxicated; also to use a saturated solution of the chlorate of potash, as a mouth wash and gargle to the throat. We should have said that his tongue was swollen, so as to leave the prints of every tooth upon it, and was heavily furred, and ulcerations had appeared at various points. My directions were adhered to; a pint and a half of whiskey was used daily, and the patient recovered without taking his bed at all. In regard to hard cider, we have seen many cases of typhoid fever, in which this stimulant has been almost irresistibly craved; in such cases, we have always gratified the desire, and good has always resulted from it.

As an article of diet, Dr. Kneeland recommends the following: "As an article of diet, remedial, and yet palatable, I would recommend, where they can be obtained, sour-baked apples, mixing the tender pulp with sugar, or giving them alone, if the patient so prefers them. For many years I have used apples in this way as *the diet par excellence* in scarlatina; and how many grateful little ones, nauseated with pap, porridge, and panada, have risen up to call me blessed, for the grateful change to the apple diet!"

As a local treatment, he has no very high opinion of nitrate of silver: "To prevent the secretion from forming after removal, (as it often does,) I would use tannin and dried alum, applied with a soft linen rag, or on the moistened finger, to parts within reach, and blown into the throat through an ivory or glass tube; or two or three quills introduced into each other answer a good purpose; no harm follows inhaling this powder, as a short paroxysm of cough clears all out again."

The pulverized burnt alum we first saw recommended in the *N. O. Medical and Surgical Journal*, by Dr. Bigelow, then of Paris. We have used it often, and with satisfactory results. We prefer it to nitrate of silver. "For a gargle, the following is my preference, after trying a variety:

R.—Hyd. chlo. ammoniæ,	3ij.
Sodæ muriat.,	3iv.
Pulv. capsici,	3ij.
Vinegar,	3ij.

Add one and a half pints hot water; cool, and use freely. If any is swallowed, no harm follows." * * * "I apply externally over the throat salt pork, moistened with turpentine, and quickened with pulv. sem. sinapis, or capsicum, if need be."

The views of Dr. Kneeland, in regard to treatment, correspond very well with our own; we conclude with his concluding paragraph in regard to its nature: "From what I can gather from the recorded or narrated experience of others, and my own knowledge of the disease as gleaned from a limited number of cases, I have concluded that diphtheria is a blood-changing disease, and that lesion of function in the spinal nerves occurs early in grave cases; that we must not wait for sinking, but, if possible, *anticipate and prevent it*; and, finally, that to *oxygenate the blood*, and rouse and vitalize the nervous system, are the leading indications to be sought."

MONTHLY SUMMARY OF FOREIGN MEDICAL LITERATURE.

By DR. L. ELSBERG.

20. *A New Test for Alcohol.* By LUDGER LALLEMAND, &c. (Du Rôle de l'Alcool et des Anesthésiques dans l'Organisme; Recherches Expérimentales. Paris, 1860; London Medical Times and Gazette, Jan. 12 and 26, 1861.)
21. *Rôle of Alcohol in the Animal Economy.* By LUDGER LALLEMAND, MAURICE PERRIN, and J. L. P. DUROY. (Ibid., Review in Med. Times and Gazette, Jan. 12, 1861.)
22. *On Anæsthetics and Artificial Respiration in Apparent Death from Chloroform.* By same authors. (Ibid.)
23. *Why the Umbilical Cord Contracts.* By R. VIRCHOW. (Cellular Pathology; Berlin, 1860; London, 1861.)
24. *An Instance of Laceration of the Lung without Injury to the Ribs.* By DR. COMOLLI GIOVANNI. (Annali Omodei, Vol. CLXXI., p. 14.)
25. *On the Penetrability of a Layer of Oil by Atmospheric Oxygen.* By A. VOGEL and C. REISCHAUER. (Froriep's Notizen aus dem Gebiete der Natur und Heilkunde, 1860, IV., No. 13.)
26. *The Best and Cheapest Sinapism.* By ROBERT FRORIEP. (Froriep's Notizen, 1860, IV., No. 17.)
27. *Antidotes for Phosphorus Poisoning.* By H. SCHUCHARDT. (Casper's Vierteljahrsschrift, XVIII., 2.)
28. *Calomel for the Removal of Insects from Sores.* By THOMAS ATKINSON, M.D. (Dublin Medical Press, Jan. 16, 1861.)
29. *The Permanent or Prolonged Local Warm-Water Bath a Cure for Ingrown Toe-Nail.* By DR. EDUARD ZEIS. (Die permanenten oder prolongirten Localbäder bei verschiedenen örtlichen Krankheiten. Leipzig and Heidelberg, Winter, 8vo, 1861.)

30. *The Uterine Douche as a Remedial Agent in Cases of Galactorrhœa.*

By DR. ABEGG. (Monatsschrift für Gebirtskunde und Frauenkrankheiten, December, 1860.)

31. *Anacahuite Wood, a Reputed Remedy for Consumption.* By DANIEL HANBURY. (London Pharmaceutical Journal, February, 1861.)

20. The vapor of alcohol reduces a solution of chromic acid to the green oxide. To detect alcohol in the breath or perspiration, it is necessary only to breathe, or pass the vapor from the skin, through a drachm of the solution of 1 part of bichromate of potassa in 300 parts of strong sulphuric acid. Dr. E. Smith has recently shown before the Medical Society of London and the Society of Arts, that by inclosing the arm of a man in a caoutchouc bag, through which a current of air is made to pass, the presence of alcohol may be detected at the end of one, two, three, and four hours after alcohol has been taken, and doubtless, too, for a much longer period. It is best shown in those who perspire freely.

21. Liebig's dictum, "Alcohol stands high as a respiratory material—its use enables us to dispense with the starch and sugar of our food, and is irreconcilable with that of fat," is, at last, assailed. The authors' experiments prove that alcohol is *not* one of those alimentary substances which undergo oxydation; but that, remaining in the blood a certain time, it is eliminated by the lungs, skin, and kidneys, totally and entirely as alcohol, with the exception of a very small quantity acidified in the stomach.

22. Alcohol, chloroform, ether, and amylene have a primary and special effect on the brain and spinal cord. They accumulate there. They abolish the sensibility of those parts to mechanical irritation, though not to electricity. Carbonic acid and carbonic oxide, on the contrary, stupefy by direct alteration of the blood; and the nervous centres retain some sensibility to mechanical irritation as long as life lasts. This is a marked and important distinction.

Our authors reject sedation and paralysis of the heart as causes of death in animals under chloroform, and state that life may always be saved if artificial respiration be begun even after the heart has ceased to beat. There is no true *asphyxia*, or disturbance of blood-change, as there is after inhalation of the two carbonic gases, but cessation of breathing, merely because of the narcotism of the medulla oblongata. Artificial respiration saves life by stimulating the pulmonary mucous membrane, by setting the heart in motion through reflex influence, and by allowing the blood charged with chloroform to part with some of it to the fresh gaseous current introduced. But so that the respiratory

movements be set going, it does not matter at all with what gas the lungs are filled during the first few inspirations. Nitrogen or hydrogen is as good as atmospheric air, *and oxygen inhalations are worthless*; the great point is to excite the act of breathing with sufficient energy, so as to stir the heart and devaporize the blood.

23. In a transverse section of the umbilical cord, it may be observed, that the thick middle coat of the vessels is entirely composed of smooth muscular fibres, lying in immediate contact one with the other, and in such abundance as is scarcely to be seen in any completely developed vessel. This peculiarity explains the extraordinarily great contractility of the umbilical vessels, which can so readily be seen in action on a large scale when mechanical stimuli are applied, when the vessels are divided with scissors or are pinched, or after the employment of electrical stimuli. Sometimes, upon the application of external stimuli, they even contract to such a degree that their canal is entirely closed; and thus, after birth, even without the application of the ligature, as when, for example, the umbilical cord has been torn asunder, the bleeding may stop of itself.

24. The wheel of a carriage passed over the chest of a lad, æt. 15 years, without fracturing any of the ribs. He died on the tenth day, of pneumonia, notwithstanding energetic antiphlogistic treatment. At the autopsy no fracture could be detected, but air escaped on opening the thorax, which contained also much fluid. The left lung, filling only a fifth of the cavity, adhered to the parietes, and a laceration was found at the anterior edge of the middle and upper lobes, accompanied by a loss of substance, as well as by an aperture in the pleura. The laceration was about an inch in diameter, and was surrounded by a fragile tissue, infiltrated with pus.

25. It is well known that water evaporates, in spite of a covering layer of oil, though, of course, more slowly. Experiments have now been made to prove that the oxygen of the air penetrates a layer of oil, also, to reach a liquid beneath. Thus, a reduced solution of indigo was oxydized, after some time. By using a solution of oxide of iron, and afterwards determining the character of the peroxide, the accession of oxygen was determined quantitatively. It was also seen that different oils possess the property of allowing oxygen to pass through in different degrees.

26. "Spirit of mustard" is prepared by mixing a drop of the volatile oil with a drachm of water. A piece of blotting-paper moistened with this solution, applied to the skin and covered with oiled silk and a bandage, is the best, most effectual, cleanest, and cheapest

form of a sinapism. The mixture should be prepared fresh every time it is used. It causes a burning sensation at once, which increases for ten minutes, and disappears in half an hour, without vesicating or producing any other troublesome consequences, even if it be not removed. A vivid reddening of the skin is the only consequence. This form of the rubefacient is preferable to the common mustard plaster, because it acts far more certain, is prepared more easily, and is more cleanly.

27. In cases of poisoning by phosphorus, we have to combat the primary, irritant effect on the stomach, and the secondary on the whole body, blood and nerves. Against the first, magnesia, oil, and other means have been formerly recommended, but they do more harm than good. The phosphorus in the stomach should be sought to be converted into acid, for which purpose the domestic vinegar may be employed. Dilution by large ingestion of water with mucilaginous drinks, or mixed with a little milk, but *no oil*, and emesis, f. i. by tartarized antimony, are also indicated. To counteract the secondary or chronic toxical effects, it is still necessary to oxydize the phosphorus that has passed into the blood, as also to neutralize the phosphoric acid thus formed, at the same time that the paralyzed energy of the heart, blood-vessels, and nerves requires stimulation: acids with ammonium, especially spirits mindereri, in large quantities, will answer here best. Finally, it is also necessary to promote the excretion, of the phosphoric acid and phosphate of ammonia formed, by the urine.

28. A little calomel strewed over the part, or blown into the wound from the end of a quill, will immediately rid the patient of the troublesome maggots sometimes met with in sores.

29. Dr. Zeis most strongly recommends the local water-bath, permanent or prolonged, in many of the most troublesome local affections, claiming to have obtained most beneficial results from its use. In ingrown toe-nail, he urges the immersion either constantly for some time in warm water, or at least with short intervals for from four to six or eight weeks, which he says at once relieves the patient from all pain; the inflammation subsides, and the nail grows quicker, and normally.

30. It has been proved that excitation of the mammary nerves induces contractions of the uterus, and that excitation of the uterine nerves makes a decided impression upon the nerves of the mammary gland. Dr. Abegg has successfully applied the principle involved, in the treatment of most obstinate cases of galactorrhœa, which yielded

to the warm uterine douche, of about 100 F., employed for fifteen minutes every evening, for from a week to eleven days. A catamenial flow was induced, and the galactorrhœa checked. Dr. A. concludes: "Further observations will teach whether this intimate connection between uterus and mammæ can be therapeutically made use of only in the rare cases of galactorrhœa, or perhaps also in other chronic diseases of these organs, by inducing increased innervation and congestion in the one, in order to remove the same, abnormally existing in the other, or the consequences thereof."

31. "Anacahuite wood is administered in the simple form of infusion, shavings of the wood, previously deprived of its bark, being treated with boiling water, as in the preparation of tea. The infusion is drunk in the morning, fasting, and again in the evening, at bedtime. In cases where the disease has already made considerable progress, the infusion may be used as often as the patient is inclined to drink."

[This extract, a translation from the *Archiv der Pharmacie*, we insert, that our readers may be somewhat informed as to the latest "remedy for consumption." Whether it really possesses any of the virtues ascribed to it, ("spitting of blood is removed in a few days," etc., etc.,) the future must prove. It is at present extensively tried by the profession in Europe, especially in Germany.—L. E.]

REVIEWS AND BIBLIOGRAPHY.

The Transactions of the American Medical Association. Vol. XIII. 1860. Pp. 930.

The papers of this volume, which, in its appearance, is the same with its predecessors of the last few years, are thirteen in number, and we proceed to consider them separately or in groups, as may best accord with their subjects and our limits.

Commencing with the first in order, which is the address of the retiring President, Dr. Henry Miller, we find that its topic is Medical Education, a subject which can scarcely be called new to the Association, or to the profession generally. With this, we group the report of the Standing Committee on Medical Education, written by Dr. Reese, of New York, the chairman of that committee. Both of these occupy some forty pages of the volume, and we cannot comprehend the advantage of repeating in Dr. Reese's words what has been better said by Dr. Miller. This is more especially the case when we notice

that a good portion of the more valuable parts of the committee's report consists of extracts from the report of a former committee on the same subject, and were long since printed in the Transactions of the Society. Do committees on medical education revolve in cycles of eleven years? If so, it may be economy for the Association to stereotype those reports, and thus save themselves the expense of resetting their type. We are inclined to think the period of revolution is even more brief. Certainly, almost the same ideas have been repeated every year. We do not feel at all called upon to discuss the resolutions appended to the report, for where they suggest any alterations they are of a character which renders them impracticable. Besides, if any one wishes to discuss them he can go to Chicago next June, and talk as long as the Association will listen to him. The ideas of the report and of the address are those with which we are familiar. The charge is, that our medical students are not sufficiently well versed in their profession to practice it, and that the only remedy is to "elevate the standard" of education. Our opinion has been heretofore freely expressed upon this subject, and we shall not now say more than this, that neither the lengthening of terms, nor the increase of the number of lectures, nor any of the panaceas proposed by the respected committees of the Association, have done, or can do, any good. The entire independence of our medical colleges of each other, especially when located in different States, and the absence of all sovereign control of the education of the profession similar to that of the French empire, lie at the bottom of all the failures of the committees to produce any effect; a failure which the President of the Association fully acknowledges. And this must continue to be the case unless some autocratic ruler hereafter swaying the destinies of our nation shall with much evil bring to us this one good.

One statement of the President we at once take up, and challenge its correctness. It is contained in this extract: "That there has been a great default in medical education within the last five-and-twenty years, it were useless to deny. The education of physicians has not kept pace with that of theologians, or even lawyers; and our profession has so far lost caste as scarcely to deserve to be ranked among the learned. I make this confession in no captious spirit, but with deep and painful mortification."

Now, is this so? Are medical men now less careful students or less successful practitioners than they were twenty-five years ago? Is our reputation abroad anywise inferior to what it was twenty-five years ago? Have we a smaller proportion of good surgeons, or of eminent

physicians, than we had then? To all these queries, the inevitable answer is a negative; and not only so, but we can safely assert, that never before did American medical knowledge stand in such high esteem in Europe as at this day; never before has there been so great activity of the medical men of our country in studying disease, in recording for the instruction of our successors the history of epidemics; never before have we had in our ranks so large a number of well-educated men; never before has the press brought out so many excellent professional works from the pens of our own writers. If we compare our position with that of the theologians or lawyers, we can match our inferior medical schools with double the number of inferior theological schools, and with at least school for school among the lawyers. We do not desire to cry peace, peace, when there is no peace, as Dr. Miller fears may be done. We would urge both private and public teachers to use their utmost diligence to make their pupils more thorough students, and more perfectly to qualify them for their professional life, to "elevate the standard" all they can. But we will not in silence listen to unfair comparisons between the young men of our own and other professions.

The paper next succeeding the President's Address is a Report on the Medical Topography and Epidemics of the State of New York, by Joseph M. Smith, M.D. It occupies almost two hundred pages, and is illustrated by a Map of the State, which gives the position of seventy-two meteorological stations within its limits. Taking it as a whole, it is a valuable contribution to the history of the epidemics of our country, and of the topography of the State of New York. Free use has been made in its compilation of the papers preserved in the various volumes of the Transactions of the Medical Society of the State of New York, thus giving an illustration of the value of these separate papers, sometimes very dull in themselves, and at the same time encouraging us to hope that hereafter it may be possible for some one to find out some of the obscure principles which control the course of epidemics by carefully studying these more extended reports to this Association.

In the same class we should rank the paper which follows next in the volume, entitled "A Report on the Medical Topography and Epidemics of North Carolina, by James H. Dickson, M.D. Its author is at a disadvantage as compared with the reports for New York, from the fact that his State Society has not accumulated so large a number of papers upon various local epidemics, and the usual difficulty in getting sufficiently minute information from busy practitioners has

been experienced by him. It is not so elaborate a paper, is not so systematic, and is less formal. Still, we incline to the opinion that it will be more acceptable to the profession at large, especially to the practical workers, for it not only describes the periods during which diseases have prevailed, their course and their duration, but is largely occupied with the symptoms characteristic of them, and the treatment which has been most successful. To the practitioners in this portion of our country it must continue to be a valuable paper. Certainly it does credit to its author, and is not unworthy of a place in the Transactions of the Association.

At the meeting of the Association, of which this volume is the fruit, the plan of dividing the members into sections, for the purpose of more carefully considering the papers brought before them, was adopted. The papers just spoken of, or abstracts of them, were read before the Section on Medical Topography and Epidemics. We now come to the papers read before the Surgical Section. The first is a "Report on the Various Surgical Operations for the Relief of Defective Vision," by Montrose A. Pallen, M.D., of St. Louis, Mo. It treats of anchyloblepharon, symblepharon, trichiasis, entropion, ectropion, and strabismus. It occupies about sixty pages, is very much the same that is said on these subjects by the recent works on the Surgery of the Eye, would make a very good appearance in a book on the subject, but is of no especial value here, and does not require any extended notice.

It is followed by a "Report on the Improvements in the Art and Science of Surgery in the last Fifty Years," by Joseph N. McDowell, M.D., of St. Louis, Mo., which is, to say the least, a queer paper, the title being about as appropriate to it as if it had been "concerning frogs." It begins with Galen and Ambrose Pare, touches on Bichat, John Hunter, Charles Bell, Astley Cooper, and John Abernethy, then comes down on pathologists in general, and Broussais and Andral in particular, all within the first six of its forty pages. The remainder contains some hard writing, some extracts from Gross' Surgery, (a part acknowledged, a part not,) some hints of a practical character, and some garrulity, making altogether such a combination as defies any review of it. Its closing sentences we quote for the edification of our readers. "In conclusion, I will add, that the obvious reason for the great success of American surgeons over the European is, that they follow less the dogmas of the schools, less the hyperborean (sic.) practice of European schools, and are more governed by reason and common sense, and operate on a people of better constitution.

"The glory of the French is to theorize and to operate, but with little care for the patient afterwards. The English and the German are less careless of life, and are more prudent in practice. If some of our American authors and teachers could not read French, or translate from the Dutch, and were less disposed to be led like an ape by a string, to the music of a Dutch or French hand-organ, we should justly expect improvement at home. But when men who claim to be Americans, and in positions in distinguished schools, will do justice to Americans, we may have emulation among ourselves; as it is at present, however, when anything that is either good or great is done by American surgeons, it is first denied in Europe, then claimed by them, and their claim admitted by us as just. 'Justice to our brethren, truthfulness and self-reliance,' should be our motto.

"American surgeons have proved themselves most successful in practice, as their living patients bear testimony. American teachers should feel that they are justified in the conclusion that they are most capable of giving instruction in their own country, to their own countrymen. Why should they be sent to Europe if they can be taught better on our own continent? Why should pupils go East if they can find surgery as well taught in the great West?"

We should say that comment on this is unnecessary, if not impossible.

The third paper from the Surgical Section is entitled a "Report on Morbus Coxarius, or Hip Disease, by Lewis A. Sayre, M.D.," in which there is noticeable a curious tautology. Did its writer think the learned members of the Association would not know what morbus coxarius is, if he did not give the more common term? We are reminded of the custom of a professional acquaintance, who always, in describing his treatment of a case, would give the common name for his remedies, repeating them in the more technical expression. The result was rather ludicrous.

This, however, is comparatively a small thing, especially since the paper is a very excellent one, in our opinion, by far the best one in the volume, if we consider directness, clearness, simplicity and truth, as desirable characteristics of such documents. The disease is so common, its treatment is so important a subject to every practitioner, that we shall dwell somewhat fully on the paper, presenting, in the first place, the following analysis of it:

1. The anatomy of the joint, in which there can, of course, be little that is new. Attention is called to the fact that the synovial membrane of this joint has a large surface which is as liable to inflame as any other similar structure. The author is of the opinion that many

cases of hip disease "commence as a pure synovitis, and should be treated on the same general principles as a synovitis of any other joint."

2. The *causes* of the disease are various—falls, blows, injuries, cold, or anything which may produce a synovitis of the joint. In a strumous subject this disease, if neglected, goes on to involve the cartilages and bones; that is, to coxalgia. Most writers state that morbus coxarius is a constitutional disease; "that it is essentially strumous in its origin and character." This doctrine has been taught for seventy-five years. Having been led to doubt this, especially from the fact that *local* treatment has been far more effectual than *constitutional* medication in curing the disease, Dr. S. endeavored to investigate the true causes, and found that most of his patients "were of a robust constitution previous to the commencement of their attacks, and their constitutions gave way only when their sufferings became so intense as to deprive them of their nightly rest and appetite, and to render them incapable of enjoying their accustomed out-door exercise." The effects had been mistaken for the causes.

3. There are *three stages* of the disease, which are marked by different symptoms. *First*. The inflammatory, the symptoms of which are frequently obscure, and are commonly referred to the knee—slight limping, imperfect flexion of the hip-joint—the sound knee can be carried to the chin, the diseased limb cannot; pressure of the head of the bone against the acetabulum produces pain; extension relieves the pain, unless the ligaments are ulcerated. *Second*. The stage of effusion, producing eversion of the limb, abduction and *apparent* elongation, flattening of the nates, and, if the effusion is excessive, *apparent* ankylosis.

Third. The stage in which the capsular ligament is ruptured, the contained fluid, whether serum or pus, or both, escapes; and there is *inversion*, *adduction* and *apparent* shortening. The fluid may escape by perforation of the acetabulum. Dr. March, in 1853, pointed out the error of the common notion that luxation occurs.

4. The *diagnosis*, as laid down by the author, presents nothing requiring special comment. In fact, it is itself a careful abstract, not permitting any further condensation. We must either give the whole or none.

5. The *treatment* of the *first stage* is local depletion by leeches or cups if necessary, and a relaxed condition of the bowels; rest of the joint, and relief of the pressure of the synovial surface, together with such constitutional treatment as each case may require. Issues in this stage are worse than useless; iodine may be of service. Permanent

extension, with motion of the joint, *is the great indication*, for which purpose the author proposes an instrument.

In the *second stage*, if the effusion is slight, moderate depletion locally, mild mercurials internally and externally, pressure by adhesive straps about the joint, and slight but permanent extension by weights while the patient is in bed, or by the author's instrument. If the inflammation of the joint is very acute, an active antiphlogistic treatment is necessary; and if effusion is considerable, it must be removed by punctures, either subcutaneously or with a trocar. In the third stage, if the fluid contained in the joint be of a plastic character, the author's instrument is all that is necessary, as recovery will take place with some motion of the joint. If caries has occurred, the proceeding is different. Exsection of the bone is thus indicated, the wound to be kept open till the disintegrating fragments are all discharged, and absolute rest of the joint, with moderate extension, by means of the "wire breeches," a serviceable limb being the result.

But this brief abstract must suffice. It will be noticed that there are several points of interest in the paper. First, as to the pathology of the disease—that it is *not* a strumous disease. Second, as to the result to be anticipated; not only the life of the patient spared, but recovery, with a useful joint and limb. Third, as to the means in the early stages, mechanical appliances to allow the patient to walk even, while the head of the bone is kept from rubbing upon the acetabulum by a system of elastic extension and counter-extension; in the third stage, removal of the carious head of the bone, by exsection. Several cases are reported to maintain the author's opinions, and in support of his doctrines with regard to exsection, he has presented a table containing a synopsis of one hundred and ten cases in which that operation was performed. Of these, *seventy-two* (nearly two-thirds) recovered, with a joint more or less useful, thirty-eight died, and two were unfavorable. Few of our readers will fail to be surprised at this statistical result.

The mechanical appliances for producing extension and counter-extension which shall be constant and yet allow the patient to go about, even to walk or run, seem to us to be as ingenious as anything which has been produced for many years in this department. It is to Dr. H. G. Davis, of New York, that we are indebted for the invention, and the attention of the readers of the MONTHLY has been repeatedly called to it. Any one who is not familiar with it, will find a description in the MONTHLY for April, 1860. It is at least five years since we first saw it on a patient, and it is difficult to say which was greater, our surprise to see a patient in the third stage of the disease

rolling his hoop in high glee, or our delight that surgery had again vindicated its claim as a progressive art.

It seems that Dr. Sayre did not grasp the idea of the value of the invention till later, but has made good use of it since 1859. We regret that he does not give the inventor a more just credit for it. Although he copies Dr. Davis' description of it, and with an illustrative cut, he modified it in several particulars, which do not affect a single principle of it, and then calls it *his own* (my) instrument. Now we *know* that Dr. S. is not the man to do injustice intentionally to a professional *confrère*, but we fear that the not unnatural enthusiasm for one's own devices often blinds us to the fact that they do not excel, though they may differ from others. As Dr. S. in his paper frankly acknowledges that he had been unable to *invent* an instrument that should accomplish the desired extension, while Dr. Davis' "answered the purpose admirably," we trust that he will take care that no occasion is given for the supposition that he intends to appropriate to himself the merit of another's labor.

(To be continued.)

An Elementary Treatise on Human Anatomy. By JOSEPH LEIDY, M.D., Professor of Anatomy in the University of Pennsylvania, &c. With 392 Illustrations. Philadelphia: J. B. Lippincott & Co. 1861. 8vo. Pp. 663.

Truly a republic is the commonwealth of Science. Truly, the portals of her glorious temple are widely opened to whosoever will duly enter. Truly may the lowliest, earnest worshiper aspire to the sublimest priesthood, attain the loftiest prominence, and wield the mightiest sceptre! The touch of the wand at which even the sepulchres of past ages give up their fabled dead is universal in its sway. Cheerfully and reverently are the master-minds crowned with bays of richest honor. Their researches imperishably infix their names upon their self-erected monuments. Such names become watch-words to patient, toilsome study, and are beacon-lights of scientific progress. Such a name every worker in science proudly recognizes in the simple, magnificent one—JOSEPH LEIDY.

It is not our present purpose to review Prof. Leidy's brilliant career; nor do more than refer in this connection to his eminence as an anatomist, microscopist, palæonthologist, or to his surpassing qualities as a lecturer, a demonstrator, or a teacher. Our task is limited to a notice of the book the title of which heads this article. We freely confess that we approached the examination of it confident of finding

merit of the highest order; prepossessed in its favor, from the known ability of its author. We at once regretted that the too elementary character of the work rendered it scarce worthy of the author's experience as a teacher and reputation as an anatomist. As we proceeded with the examination, this regret grew upon us; and we wish here to express our earnest hope before long to be able to record the publication of a complete systematic treatise on anatomy by the honored and able author.

Judged as a "first book of anatomy," the work before us, with its truly splendid illustrations, many of them original, is unsurpassable; and it would seem, after examining the work before us, to require no prophetic knowledge to predict its introduction as such in our schools and for private instruction, to the exclusion of all others. It would certainly argue want of discrimination, appreciation, or the influence of qualities or motives prejudicial to the interest of the learner, if it were not soon generally used. If the author had done no more than introduced his simplified, anglicized nomenclature, he has in this way alone removed so much of the difficulty experienced in the acquisition and retention of anatomical knowledge, that no learner who knows of its existence and could get it, would willingly do without it; but altogether, for its limits, in description and illustration, it has no equal in the language. True, the arrangement is not thoroughly and consistently systematic, but it is the most convenient and useful to the student. Keeping the object steadily in view, sufficient completeness in detail, embracing the whole subject of human anatomy, has been attained, with admirable conciseness, throughout; and though, as to diction, the hypercritical might collect a few instances of a faulty use of present participles and incorrect syntax, the style generally is remarkably perspicuous, and the anatomical descriptions, in every case, simple, clear, and faithful to nature, as they can be given only by one who has observed and taught much and well.

In paper, of superior quality and beautifully tinted, and typography, elegant and faultless, this volume excels everything before attempted by publishers of medical works in this country. The publishers and the author—in fact, all that have had anything to do with its "getting-up"—have combined to make "a magnificent book." L. E.

NOTE.—Owing to the number of papers on file, and the very great demand on our pages, we have been compelled, though very reluctantly, to cut down the analytical review, already postponed from month to month since December last, into the foregoing brief notice. In justice, we must add, that what we have presented is hardly more than the introductory and concluding passages of the lengthy and able article prepared for us by the reviewer.—EDITOR OF MONTHLY.

Statistical Report on the Sickness and Mortality in the Army of the United States, compiled from the Records of the Surgeon-General's Office; Embracing a Period of Five Years, from Jan., 1855, to Jan., 1860. By RICHARD H. COOLIDGE, M.D., Assistant Surgeon, U. S. A. Washington, 1860; pp. 515, 4to.

This is one of the few really valuable public documents that have appeared during the last year. It is generally admitted that the only reasons justifying the vast expenditure incurred by the government in printing *most* of the public documents, are, that government patronage is thus increased, members of Congress have opportunities of keeping themselves in good odor with pot-house politicians and frequenters of cross-road groceries. The documents are soon devoted to ignoble service as wrapping-paper, and the labor involved in their preparation is forgotten. Occasionally, however, science commands a little notice, and the public treasury contributes towards the publication of some of its contributions to the public good. The medical statistics of the army have been presented to the profession through the liberality of the government, in three volumes, embracing most interesting and valuable information, extending from the first organization of the *Army Medical Bureau*, down to the commencement of last year. Much credit is due to the Surgeon-General for his selection of one so well fitted to undertake the task of compiling the report, from the records of his office, as Dr. Coolidge. The medical officers of the army are a hard-working body of men, who, under circumstances frequently of the most adverse character, exhibit true love for their profession, and desire to add to the general fund of knowledge. These reports are fair exhibits of what they are doing in the direct line of duty, and are entitled to much respect from the profession at large.

The statistical report consists of tables, exhibiting the amount and ratio of sickness and mortality at the different posts occupied by our army. These are accompanied by extracts from the sanitary reports of the medical officers, which treat of the nature of the situation, special and general local causes of disease, methods of treatment that have been found serviceable, and general suggestions as to diet, regimen, &c., of the soldiers. Scientific subjects of interest outside of the profession, and facts in natural history, may also be found in these reports; showing that leisure hours are devoted to observations and investigations of general interest. It would be impossible to give any *résumé* of these. They are generally expressed in as few words as possible. As regards the treatment of disease, the reporters mention

plans very different, but this is no more than could be expected in a body of men stationed at points so essentially different in climatic characteristics.

The report would be made more generally useful if a full and complete index were prepared. The table of contents but enables the reader to find out the reports from different portions of the country, but does not give him any aid, should he wish to examine into the opinions of the medical officers, on the nature and treatment of particular diseases. We believe that an index, which would enable one to find subjects, would be a great addition to the valuable report. It is not only the statistical tables which the profession will value, but the contributions to practical medicine and science that are also comprised in the volume.

L. H. S.

JOHN WAKEFIELD FRANCIS, M.D., LL.D., &c.

BORN NOVEMBER 17, 1789—DIED FEBRUARY 8, 1861.

[Eulogy read before the Medico-Chirurgical College, March 7, 1861, by Prof. A. K. GARDNER, M.D.]

Travelers in foreign lands, returning full of enthusiasm, have given us gorgeous descriptions of the snow-capped glories of Mont Blanc. The man of business and figures has told us of its wondrous height; the geologist has given us the dispositions of its trap and siennite, has laid out its water-courses, described the heavings and motions of its *mer de glace*; the farmer has wondered at its fertile fields, with its fruit-laden strawberry vines beside the everlasting ice; the botanist finds enthusiasm in the mosses and algæ of its rocky cliffs; the painter tells you of the sublimity of the view when the setting sun pours its resplendent rays upon its heaven-piercing peak; the poet breathes out his immortal verse at its inspiration; the dreamer gazed and gazed,

“Till the dilating soul, enrapt, transfused
Into the mighty vision passing—there
As in her natural form, swelled vast to heaven,”

As the Swiss mountain in the physical world, so rose the snow-crowned head of the late Dr. John Wakefield Francis among his peers. Colossal, towering above the range of lofty intellects among which he stood—not comparatively great by isolation—many-sided, every person who knew him has formed of him an estimate more or less varied in accordance with his powers of observation, the density of the atmos-

phere through which he gazed, and the clearness of vision to which he attained, whether seeing only the exterior man, or after gaining access to the intimacy which enabled him to feel that great heart pulsating ardently for every noble aim, and every enterprise where the good of our common humanity was to be subserved.

The speaker of to-day for years gazed from afar upon the rugged lineaments of this hoar apostle of medicine; later was warmed into new life by the radiant sunshine ever playing around his genial front, daily feeling ever-renewed evidences of that interior warmth which melted the thin outhanging ice-crusts, producing beauty, and life, and joy in its path. He has seen the interior man, noted the inexhaustible stores of native and acquired intellectual wealth, the kind heart, the generous hand. He must fail in attempting to portray them. If he can but catch the, alas! already vanished picture of one side of this huge polygonal and daguerreotype it for your observation, he will be content; leaving to those of more extended grasp to seize the whole man, and instead of the simple picture which is now to be presented to you, shall carve out a colossal statue, wanting but the Promethean spark, to be the very form and figure of him whose like we shall never look upon again.

BIRTH AND PARENTAGE.

John Wakefield Francis was born in the City of New York, November 17th, 1789. His father, Melchior Francis, was a native of Nuremburg, Germany, who came to this country shortly after the establishment of the American Independence. He followed the business of a grocer, in the neighborhood of Pearl and Fulton Streets, where the doctor was born, and was distinguished for integrity and enterprise. He fell a victim to yellow fever. Dr. Francis' mother was from Philadelphia. Her maiden name was Sommers, of a family originally from Berne, in Switzerland. It was one of the favorite historical reminiscences of her son, that she remembered when those spirits of the Revolution, Franklin, Paine, and Rush, passed her door on their daily associations, that the children in the neighborhood would cry out, "There go Poor Richard, Common Sense, and the Doctor."

Those familiar with our deceased friend well remember the bursts of enthusiasm with which he ever greeted the mention of the name of Franklin, and particularly that ebullition of feeling and oratorical expressions, when, after his return from the annual meeting of the American Medical Association in 1849, in Philadelphia, he described his visit with Drs. V. Mott and R. H. Kissam to the quiet and unostentatious

grave of this great patriot and sage. It was with him a pleasing fancy, that in personal appearance he bore a considerable resemblance to one whom he so revered, and who, like him, had commenced life at the printer's galley, earning his daily bread setting type and handling the composing-stick. Thus this association is not merely a matter of fancy, for in early youth Francis was apprenticed to the trade of a printer, in the office of the strong-minded, intelligent, and ever-industrious George Long, at that time a prominent bookseller and publisher. In after years he related the anecdote of the hours stolen by the young Francis from meal-time and recreation, as, sitting under his frame, he partook of a frugal apple and cracker, at the same time eagerly conning a Latin grammar. Even at this date he was one of the few subscribers to the slowly issuing English edition of Rees's Cyclopædia, to which he afterwards contributed valuable articles, to the benefit of the work and markedly to his own literary reputation.

The love of letters was, however, not limited to mere type; but, ambitious of higher duties and occupations, by the kindness of his master his indentures were canceled, that he might pursue the career to which his taste urged him, and which, fortunately, the easy circumstances of his then widowed mother rendered feasible, and he fitted himself for college under the charge of the learned preceptors, Rev. George Strebeck, and the classical Rev. John Conroy, of Trinity, Dublin. He was thus enabled to enter an advanced class of Columbia College, graduating in 1809, receiving his degree of A.M. in 1812.

In 1807, while yet an undergraduate, he entered the office of the renowned Dr. Hosack, then in the prime of life and height of metropolitan reputation. The remarkable assiduity, zeal, and untiring perseverance, which his later cotemporaries have noted with wonder, may be seen to be characteristic of the man, and no occasional freak or exception, stimulated by a peculiar and remarkable ambition. Dr. Hosack gave his warm approbation to this assiduous devotion, and stated that, "during the period of his professional studies for four collegiate years, he never absented himself from a single lecture, nor attended one without making notes or abstracts on the subject taught by the lecturer." "What an example is this," well says Allibone's very valuable Dictionary of American Authors, "to the students of the present day, and how great has been the reward in large stores of professional erudition, in public esteem, and national reputation, for the hours thus devoted to the acquisition of useful knowledge!"

In 1811 Dr. Francis received his degree of M.D., from the Col-

lege of Physicians and Surgeons, which had been established in 1807, under the presidency of Dr. Romaine, and which had been re-organized, with Dr. Bard at his head. Francis's name was the first recorded on the list of graduates of the new institution. His thesis upon the *use of mercury* was afterwards published in the *Medical and Philosophical Register*, and gained the author much reputation. It was full of medical research, and was the pioneer of the long train of writings and labors which has given so much eclat to his name.

With his professor, Dr. Hosack, he was much esteemed, who immediately proposed a medical copartnership, which flattering testimonial to his talents and acquirements was, of course, accepted, and continued till 1820; and the fruits of which were not limited to his profession, but their names were united in many schemes for literary and social improvements.

In compliment to his acquirements, Dr. Francis was appointed, in 1813, Professor of the Institutes of Medicine and Materia Medica, when the medical faculty of Columbia College and of the College of Physicians and Surgeons were united; and shortly after his popularity with the students gained him the position of President of the Medico-Chirurgical Society, in which he succeeded his friend, Dr. McNevin, whose biographical notice he furnished but a few months prior to his death, for *Gross' American Medical Biography*, just issued.

AS A TEACHER.

And now fairly began that life of labor and love conspicuous to the end of Dr. Francis's career. A graceful, though not eloquent talker, clear and cogent in his teachings, and free in his diverging utterances to catch up happy and remote conceits, he became a pleasing and popular lecturer. His whole soul was in his work. Between lecturing, visiting patients, and writing for medical quarterlies, he was kept incessantly busy; for at this time, besides his professorial duties, he was co-editor with Hosack, of the *American Medical and Philosophical Register*, founded by them in 1820, and attending to the largest practice then in the city. The receipts from his profession were for many years \$15,000; and considering the fact that at the time he commenced practice the population of New York was but 68,000 souls, it may well be compared even with the apocryphal sums of more modern days. He taxed his energies beyond their strength. His friends advised him to visit Europe. He went to Europe, undermined by toil and disease, and with the enthusiasm of his profession, went hunting after the medical celebrities of the Old World. He became acquainted with Abernethy, Brewster, and Sir Astley Cooper. For

literary men his penchant showed itself thus early. He saw and conversed with Byron, whose passionate verses and lyrical revelations of a dark, gloomy, and restless life were the theme of every tongue. To Sir Walter Scott, the mighty magician of romance, he was introduced, and he has since written a charming account of his visit to the Scottish bard and novelist. His pen while abroad was not unemployed, as during his stay he wrote several articles for Rees's Cyclopædia, those on New York and Rush being the most memorable. These articles contributed greatly to the literary and professional reputation of Dr. Francis, and perhaps were the seal required to convince the skeptical of his great natural and acquired powers, for at that period none read an American book or believed in anything indigenous.

After extended travels in Europe, with visits to its most remarkable places, acquaintanceship with its renowned men, he returned to this country, bringing with him renewed health, a fund of anecdote, reminiscence and valuable knowledge, most remarkable and unfailing. Those only who have enjoyed the delicious privilege of the unrestrained communications of personal friendship can fully recognize the benefits acquired by this transatlantic experience.

Any narrowness of mind, so natural to one ignorant of all save the peculiarities of a provincial town, any petty conceit of home and its various productions, or even more snobbish idea that for all excellence we must look abroad—that none originated in our own country and nation—did any such feeling exist in the mind of Dr. Francis, ever after there was no evidence of it. Catholic, comprehensive, discriminating and honest, with him the mind had no country, and literature and science were cosmopolitan. Before their possessors he bowed himself in deep respect, while the mere holder of sordid wealth, especially if ignobly gained, penuriously hoarded or profligately spent, he passed with the least possible recognition of their existence. As the poet Tuckerman has stated in his beautiful obituary, "For genius and worth he reserved his best sympathy, caring nothing for luxury, show or riches. The society of an intellectual friend, the comfort of domestic love, the acquisition of a memorial of genius, the advancement of a patriotic, charitable, scientific, or literary cause, were to him the great charm and privilege of life."

Upon the return of the young traveler to New York with many choice works, the foundation of his now renowned library, he was appointed Professor of the Institutes of Medicine in the College of Physicians and Surgeons, and in 1817, on the resignation of Dr. Stringham, he also succeeded to the department of Medical Jurisprudence. Two years later, in addition to his former duties, he also became Pro-

fessor of Obstetrics, and filled this post till 1826, when he resigned, with his colleagues, Drs. Hosack, Mott, McNevin and Mitchell. A majority of the faculty organized a new school, called the Rutgers Medical College, in which Dr. F. held the chair of Obstetrics and Forensic Medicine. The classes were large and the success of the school most satisfactory, but in consequence of discussions and quarrels with the rival school, in which it is not necessary here to enter, by legislative enactment the school was dissolved, after a successful career of four years. With this ended Dr. Francis's twenty years' labors as a public teacher.

AS A MEDICAL WRITER.

His career as a writer was, however, far from finished, and, except in a professional way, but scarce begun. Up to this period the following list enumerates the most labored and enduring of his writings: Articles in different medical periodicals on obstetrics, vitriolic emetics in the membranous stage of croup, *Sanguinaria Canadensis*, Iodine, the goitre of Western New York and Canada, on medical jurisprudence, yellow fever, death by lightning, caries of the jaws of children, elaterium, ovarian disease &c.; he has published an essay on the "Use of Mercury," (8vo, New York, 1811;) "Cases of Morbid Anatomy," (4to, 1814;) "Febrile Contagion," (8vo, 1816;) "Notice of Thomas Eddy the Philanthropist," (12mo, 1823;) "Denman's Practice of Midwifery, with Notes," (8vo, 1825;) "Address before the New York Horticultural Society," (1830;) "Address before the Philolexian Society," (1831;) "Letter on Cholera Asphyxia in 1832," (8vo, 1832;) "Observation on the Mineral Waters of Avon," (1834.)

Of these, the doctor himself thought most highly of those on vitriolic emetics in croup, an original and successful practice on his part; those on croton oil, elaterium and iodine, which he introduced to the American community; and that dated London, 1816, in which he first noted the rare susceptibility of the human constitution to a second attack of pestilential yellow fever; but among the profession his erudite labors in editing the Midwifery of Denman, far behind the present knowledge in this branch as it is in some respects, yet is in itself so marked in its advance upon previous knowledge, and so greatly increased in value by the expansive intellect of its American annotator, that it is very properly rebaptized Francis's Denman, and will long remain an enduring monument of the professional zeal, acumen, research and industry of its editor.

Released from the mill-horse routine of professional duties, the doctor found time for the more congenial employment of the leisure which could be enjoyed in the intervals of an ever large professional

business. Not, like most men, relying upon a local, family practice, Dr. F's clients were the men of all climes and places, who, sojourning in the city, suddenly taken ill, sent for the physician whose fame had penetrated into the remote quarters whence they came. He delivered numerous addresses before societies of all descriptions; among them, on Anatomy of Drunkenness, a Discourse before the New York Lyceum of Natural History, (1841.)

In 1846, Dr. Francis united with Drs. Mott and Stearns in forming the N. Y. Academy of Medicine. Owing to the existence of numerous cliques among the members of the profession, the first president was selected from among those who were aloof from all such organizations; and accordingly, Dr. John Stearns, the discoverer of the parturient virtues of ergot, a comparatively recent resident, a man of considerable legislative ability, and the oldest practitioner in the city, was elected to fill this high office and inaugurate the career of the Academy, and his term expiring by limitation, Dr. Francis, in 1847, was elected the second President of the Academy, and again at a subsequent period, when eligible by statute, was re-elected. He delivered several addresses before this body, (1847-8-9,) but his anniversary oration, the first of a series, since annually delivered by various members of the Academy, did much, by historic reminiscences and high-toned character, to elevate the Academy to the important position it has held in this community and the country. Delivered in the old Tabernacle—now itself become historical—the building, large as it was, could admit but a small portion of the crowds that were attracted by the fame of the speaker. It was estimated that 10,000 came to listen, while the building held but 3,000 when completely full.

The pursuits of his early days were not forgotten, and in recognition, he delivered addresses replete with historical associations before the Typographical Society of New York "On Dr. Franklin," (1850,) and "On the Publishers, Printers, and Editors of New York," (1859.)

The most elaborate of his historical recollections formed the subject of a double lecture before the New York Historical Society, (1858,) on "Old New York, or Reminiscences of the last Sixty Years." This was one of the happiest of his literary productions; rich in reminiscence, minute in detail, humorous, quaint and genial, redolent with kind feeling, and pervaded throughout with the characteristic *bonhomie* of the doctor, it will undoubtedly remain the most enduring of the productions of its erudite author.

A memoir of an eccentric New Yorker, of some ability, descriptive of Old New York, its appearance, and some of its most noted inhabitants, some discourses at Bellevue Hospital, (of the Medical Board of

which he was President ever since its present organization, and to which he was elected Honorary President when upon his death-bed,) and some later memoirs of his old associates, Drs. McNevin and Mitchell, complete the long and honorable list of the literary achievements of the illustrious deceased.

HONORS.

These various labors were not without recognition from the world. Besides those already alluded to, he had the high and rarely accorded honor of being chosen Foreign Associate of the Royal Medico-Chirurgical Society of London, and with De Witt Clinton, member of the Wernerian Society of Edinburgh, and other scientific associations abroad. In 1850 he received the degree of LL.D. from Trinity College, Hartford, Connecticut; and in 1860 this honor was duplicated by his much esteemed Alma Mater, Columbia College, of this city. This distinction, so charily bestowed by Columbia, was feelingly welcomed by the recipient, who reflected back the honor conferred upon him; yet still the duplex doctor continued to distribute his immemorial triplex pills. He was, from its foundation, president, and most actively engaged in promoting by every means in his power the noblest of modern charities, the Woman's Hospital of this city; and a week before his death he was elected president of the State Inebriate Asylum, at Binghamton. It is believed he had in a state of advanced preparation the addresses to be delivered at the laying of the corner-stone of the one, and the celebration of the completion of the other. It is to be hoped that these papers will not be lost; and I will suggest as a fitting compliment to the memory of the departed, that if such addresses exist, they be read by the highly educated and talented sons of him whose spirit will be with them on those eventful days.

We have thus rapidly sketched the principal public literary incidents in Dr. Francis's career. A few other more personal events are to be noted. In 1829, he was married to Miss Maria Eliza Cutler, a union which not only united him with a family of extended reputation, wide connection, and ample means, but which in itself was all that could be attained by mortals below. Those who are favored by the personal acquaintance with his bereaved widow well know how intimate was that union, how perfect was the assimilation of soul, and how entirely the life of the one was blended into that of the other. That Dr. Francis achieved all that he did, is in no small degree owing to the opportunity afforded for the expansion of his genius, by the freedom from domestic cares, by the methodical disposition of household matters, by the relief from many of the annoyances, petty vexations and harassing disturbances incident to the life of a practicing

physician. She it was who attended to the innumerable callers desirous of the doctor's signature to petitions, influence with parties, or mere loungers, aiming only to pass off their vacant hours agreeably. She received his professional calls, arranged his numerous consultations, remembered the ages of the children in his practice, provided virus, and saw that they were duly vaccinated. She attended to the nightly calls, thus preventing the exposure which, to the doctor, was so apt to be followed by most serious laryngitis. I have necessarily alluded to these facts, because to them the doctor owed so much of the time which he used to such good purpose, and because it seemed due to pay a passing tribute to the exemplary, devoted, genial, beloved woman, the pattern doctor's wife.

Three sons were the fruit of this happy union; boys that any parent might proudly claim as Cornelian jewels. One, alas! has preceded his father to the unknown world—taken away in the prime of life, in the first flush of earthly honors undoubtedly within his reach, conspicuous for unusual talents, unwonted attainments, kindly heart, and manly beauty; the cold tomb has early received this extraordinary promise, and the father and son are now reunited.

AS A PUBLIC BENEFACTOR.

Thus far we have performed but the easy task of cataloguing the perfected results of a life of threescore years and ten, in little more than a single point of view, and that a literary one. In this *résumé* no mention has been made of the ever-ready assistance rendered to the writers, historians, and orators of the time, many of whose sonorous periods have been pointed by his assistance, and their value enhanced and truthfulness authenticated by his retentive memory; were these recognized, pages and chapters from many a noble work would pass to his credit.

The labors in other directions, the encouragement by thought, personal attention, and personal influence, which have stimulated others in like situations, and which have resulted in glorious fruitions, their record is to be found in the existence of many noble and beneficial institutions. Not referring to the N. Y. Academy of Medicine, the Binghamton Inebriate Asylum, or the Woman's Hospital, already alluded to, we can see their fruits in the Historical Society, in which he officiated in its early days as librarian and general director, whose ornate library building attests his energy, enriched as it is by treasures of almost antediluvian antiquity, obtained in consequence of his untiring zeal and persistent entreaty.

Large as is this enumeration, multitudinous and comprehensive as

are the details, we feel that it all together conveys but a poor idea of the mental powers of the man; and even when it is recognized that for very many years his daily sleep was only from two to four hours at the most, can we appreciate the indefatigable industry which enabled him to compass so much.

MENTAL ANALYSIS.

The faculty of industry, however, is a more common and less conspicuous gift than memory. This was, if not the pre-eminent, certainly the most astonishing characteristic of the venerable deceased. Observation must have been almost as well marked among the cranial developments; for had he not noted the pimple upon the right ala of the nose, the scar on the left ear, or the want of a fifth brass button on one side of a green coat, as narrated by Dr. Sims—had he not noticed these trifling peculiarities, how could he have recalled them twenty, and even forty years afterwards? Indeed, he has stated that he was oppressed by the minutiae of his remembrance, and that forgetfulness would sometimes have been welcomed.

“Through the shadowy past,
Like a tomb searcher, memory ran;
Lifting each shroud that time had cast
O'er buried hopes.”

The readers of his varied works, and far more those who enjoyed his society, will ever remember the daguerreotype clearness with which he painted the portraits of the men of past times and bygone days.

Nor was it solely forms and events that his tenacious memory held in its iron grasp; places and dates precise to the minute, and the exact sequence of long-past actions—so many wonderful examples of this priceless gift are on record and in remembrance, that it is unnecessary to record them here. It was to this marvelous faculty that he owed much of his greatness. He never forgot the pages of science or poetry, the remarks of sages and philosophers; the appearance of objects were impressed upon his memory, and stood out as plainly after years had rolled by, as do the tracks of birds, and the anatomical characteristics of the fern-leaf in the now everlasting rocks of the mountain. It was to this faculty that he owed the power of interesting, often instructing, even the most erudite in their own special branch of knowledge, by reference to the works of writers of past days, who, superseded by newer lights, had, with all their richness of detail, been thrust aside for newer gods.

To industry and memory add enthusiasm—perhaps the key to the former, and the assistant of the latter—certainly that which made the

orator, the warm friend, the genial companion. "Whatever his head found to do, he did with his might:" was it the simple greeting of a friend, or a distinguished stranger; was it the advocacy of a political opinion, the arrest of a murderous swill-milk traffic, a discussion on the communicability of yellow fever, or the erection of a charity, Dr. Francis's whole soul was enlisted, and he stopped not at any obstacle. How his energetic greeting has cheered the heart of many a desponding doctor, fainting by the wayside, weary of the long days preceding tardy success! "My dear doctor," he would say, "don't despair, there is a great deal in you. Take care of your precious health; that last production of yours has crowned you with immortal honor; you will be remembered when poor Dr. Francis is under the sod. Go on, my dear doctor; I see all you do, and what you can and will effect." How cheering fell these gracious words upon the desponding ear! How many, while well knowing that there was a certain amount of exaggeration in these encouraging remarks, yet in his heart hoped, perhaps believed, that they were not all exaggeration! and that half-thought, that hope, was a cordial to his disappointed soul. The reflection that the clear-sighted, the renowned Dr. Francis had uttered such like words as these—why, one could almost point to the very flagstone where he once stood, and, sunning in his presence, drank in his honeyed words.

It was the enthusiasm flowing from his freshness of heart that belied his venerable looks. He was thus ever young; never too old to learn; never too old to teach; never too old to enter heart and soul, body and mind, laboriously and pecuniarily into any scheme for advancing the great interests of humanity, the good of his country, or the service of an individual.

"He had a genuine public spirit, such as distinguished our early race of statesmen; he loved his country, he loved knowledge, he loved eminent men—his native city, institutions, characters and places—with the ardent feelings of an enthusiast, and the loyalty of a faithful citizen. It was this going out of a limited personal sphere—this identification of himself with what he admired and loved, that kept him morally alive to the last, and endeared him to so many friends of widely different stations and pursuits. While men of letters sought encouragement in their lonely and often profitless toils from his active beneficence and warm praise, the ignorant and the poor blessed him as a kind healer of their infirmities. In our age of material prosperity and self-absorption, this generous and genial type of character has become rare."—[TUCKERMAN.]

AT HOME.

If thus, in his public career, he appeared to be every inch a man, his true place was in his own house; in the old, long-to-be-remembered residence, whose solid walls, which had witnessed so much joy, and alas! in the death of his son, so profound a grief—which had welcomed the greatest of modern rulers, the orators, statesmen, poets, professional men of all grades, lands and tongues, the fairest of earth's creatures, poetesses, sculptors, painters, sages, mere antiquaries, delving and collaborating historians, the great, and those to be renowned. Here the doctor was himself—acting upon the spur of the moment, speaking the words which the occasion suggested; now to a blooming miss, anon to an academician, to an astronomer, a conchologist, a foreign traveler, the discoverer of the North Pole; he advanced no theme which he could not discuss understandingly and elaborately—his mind, like a diamond from its numerous facets, showered streams of glowing, prismatic light, refracted and gorgeous, illuminating and developing. However erratic and wandering in his discourse, in home conversations, or in the discussions of learned assemblies, he was ever luminous and interesting, like those divergent rockets, called “chasers” by the boys, which, though uncertain in their aim, and tortuous in their course, still flashing, carry the beams of new light into regions before darkened and obscure.

Here was a home indeed. No matter whether at the dearly cherished No. 1 Bond Street, in past days a residence considered almost palatial, and, with its associates, the end of a walk to see the glories of New York architecture—or in the more modern structure of brown stone, with its plate glass, in 16th Street—the place was little; the home consisted in that cherished circle, into which came no bickerings, no heartburnings, no envies—the translation from this to a world on high could scarcely seem abrupt.

In his interior character, Dr. Francis was eminently lovely. Frequent inflammation of the larynx had given his voice a raucous tone, yet his kindly manner, and his warm smile of greeting, soon allayed the fears of children alarmed at his portly figure and his long gray hair, and clothes cut in the style of the fathers.

POLITICAL AND RELIGIOUS SENTIMENTS.

In regard to the great questions of the day, the doctor held strong conservative opinions. An old Whig of the Clay and Webster school, having no political ends to subserve, he saw no necessity for changing his views; but to the last opposed to the agrarian democratic views as developed by Cobb and Floyd, he saw daily new reasons for the

propriety of his actions in opposing the election of judges by ballot, in advocating a protective tariff, and the like. At the last Presidential election, fearing the results which have come upon our nation, he voted for the party ostensibly the Union party—Bell and Everett.

In religious matters, in the conflict of views, he was, till within a few years, unsettled in his opinion respecting tenets and dogmas. Possessing among his friends clergymen of all denominations, recognizing in all devotional feeling and true religious actions, yet so divergent in their doctrinal views, the great problem of man's present and future being was inexplicable. "I don't comprehend it," he said once to me, "but it is clear enough to others; my cook and that chimney-sweep understand it; they have no doubts, no misgivings." But the later years of his life were marked with more religious serenity, and he accepted in faith the fundamental doctrines of Christ. This uncertainty made him tolerant of the opinions of others; and while he could listen like a philosopher to the fanatical confidences of Genet, he opened the lecture-room of the College of Physicians and Surgeons in Barclay Street to the first Unitarian sermon ever preached in New York, by the pure-minded Channing, when intolerant bigotry had denied to this then feeble denomination every hall in the city.

HIS GENERAL HEALTH.

During the long-protracted life of Dr. Francis, he enjoyed unusual health and vigor; although he had had yellow fever and small-pox, and during his illness with the former he was comforted by the sight of his coffin, brought in to facilitate his removal; till, in the year 1823, he had a serious attack of laryngitis. He had been, prior to this first attack, unusually robust; and, naturally sanguineous, this disease assumed a most acute inflammatory type. Educated in the old-school doctrines, he practiced upon himself the views he had taught, and so earnestly defended ever afterwards, and during this illness had taken from his own arm a quantity of blood which has ever since been quoted as the most ultra carrying out of the depletory doctrine to a successful termination. On the 17th November, venesection to ℥xl. ; evening, ℥xx. 18th Nov., ℥xvj. ; evening, ℥xvj. 19th Nov., ℥xvj. ; evening, ℥xvj. 20th Nov., ℥xvj. 22d Nov., ℥xij. Total, ℥clij. Three or four days after, being still in a precarious condition, venesection was again repeated. Numerous less serious attacks occurred afterwards, and for which he bled himself more than one hundred and fifty times. The first great shock to his system was in consequence of the loss of his eldest son, before alluded to, from which sad dispensation he never fully recovered. His nervous system was again greatly disturbed by the excitement in-

cident to the removal from Bond Street, where he had lived so long, to a more suitable residence, away from the turmoil of business, the noisy street, and the attendant dust and smoke filled air. For many weeks sleep seemed departed from his pillow, and in the week's seven days he slept little more than as many hours.

LAST ILLNESS.

From this, however, he seemed to have quite recovered; for, when fairly settled in Sixteenth Street, cheerfulness, appetite, and vigor returned, and he again entered upon his usual life of activity and beneficence. Early in December last, he was seized with an ominous carbuncle upon his back, in the dorsal region, which attained to the magnitude of six inches in circumference; and when this had reached its maximum, a more huge one still made its appearance in the lumbar region, which swelled to the enormous dimensions of nine by seven inches. Coincidentally, numerous smaller ones, from the size of a nut to that of a hen's egg, appeared around. Such a mass of carbuncular disease never fell under the notice of his experienced attendants, Drs. R. H. Kissam and Valentine Mott.

While this disease progressed, an aphthous affection of the mouth, throat, fauces, and the entire mucous membrane, as far as the eye could reach, so disturbed his powers of eating, digestion, and assimilation, that starvation seemed imminent; but after some two weeks' continuance this unpleasant symptom disappeared, and with the return of a good appetite and the assimilation of nutritious food, it was hoped that he would be able to support the reparative process now going on in the diseased parts. But while the hopes seemed about to be crowned by a successful issue, an abscess appeared in the popliteal space, and extended well up the posterior face of the thigh. After some days this was opened, and a large quantity of healthy pus withdrawn, with apparent relief. This additional drain upon his system was, however, too much for his constitution to sustain, and for several days before his final departure he had frequent attacks of exhaustion, and nature was evidently sinking, till, in the course of the night of Thursday, it was apparent that he could not long survive. Serene and calm, as he had been during his whole illness, he expressed his entire resignation to the will of God, and met this trying hour with composure. Seeing his family gathered around his bedside, he said, "It is a very solemn thing to see you all around me—how characteristic of an exit!" Shortly after, turning to his dear friend and attentive physician, Dr. Kissam, he said, "God bless you! Blessed be God! Blessed be Jesus Christ!" He then asked if he could turn over, and

immediately after being assisted to do this, he said, "I'm gone! I'm dead!" These were his last words, for in less than three minutes from this time, at the close of nine weeks of great suffering, at a few minutes before three o'clock of Friday morning, February 8th, Dr. John W. Francis calmly, and without a struggle, entered the unknown world.

— like a time-worn clock,
His weary wheels of life at last stood still.

Dr. Francis was essentially a representative man. Many looked upon him as a type of the Knickerbocker settlers of New Amsterdam, with whom it is seen he had no affinity; yet still his short, thick-set frame, which weighed about one hundred and ninety pounds, his straight-bodied coat and vest, his white neckerchief, broad-brimmed hat, inseparable cane, and gold spectacles, made a unity in look which fancy associates to the early Dutch settlers. This pleasant figure will be henceforward missed from our streets. To the medical profession his loss is irreparable. Among our silent members his ever-ready utterance, his quaint ideas and historical reminiscences, his polysyllabic, Johnsonian language, will no more be heard. He who was ever ready to say kind words of others now needs others to speak for him. To the literary world his departure will be mourned. No needy writer ever failed to get his subscription and his influential name to his list; and if among the choice works which compose the large library he has left behind there be found a few deserving to be called trash, be assured that his head did not select if his heart paid for them. It would be curious to know the number of books and pamphlets dedicated to him! They must exceed a hundred in number, of all characters and descriptions; books of prose and poetry, on medicine and other sciences, pamphlets, and sheets of music. Within a year, one day's issue of the ever-teeming press brought three inscribed to him in words of admiration and affection.

Finally, the poor will sadly miss him. It has been well said, "that beneath a lively and off-hand address" he kept a heart "open as day to melting charity." His purse was never closed to the needy even in seeming, while his professional toils were freely given to soldiers who had battled for their country's honor; artists who had perhaps once been something, or belonged to the professions of Cooke, Siddons, Garcia, Dr. Begnis, Malibran, Sontag, or Grisi, whom he so much loved to see and hear; to the clergy of all denominations, to the sons of the sons of an old friend, or to a favorite household servant—these he attended, in larger numbers than any other professional man that I know, with a fidelity unsurpassed by that accorded to the wealthy and

those in high positions, and whose tears of gratitude dropped upon his bier was all the return he received in this world.

And what is the result we arrive at by this contemplation? We see on the one hand incessant devotion to duty, persistent toil, a kindly heart, a generous hand; and on the other a quiet mind, honor, the love of one's fellows, the tears of the poor, the gates of heaven.

Can that man be dead
Whose spiritual influence is on his kind?
He lives in glory; and his speaking dust
Has more of life than half its breathing moulds.

EDITORIAL AND MISCELLANEOUS.

Medical Society of the State of New York.—The fifty-fourth anniversary of this Society was held at Albany, on the 5th, 6th, and 7th of February. The attendance was unusually large, and the proceedings more than ordinarily interesting. The number of papers and reports read was greater than at any previous meeting. We shall have occasion to refer to them more in detail when they appear in printed form as one of the State documents. We are limited at this time to the titles of the papers.

The President, in view of the increasing activity of the Society, recommended in his inaugural a division into two sections—one medical, and the other surgical; the meetings of the sections to be held in the afternoons and evenings, the ordinary routine business of the Society to be transacted during its morning sessions.

The appearance of two delegates from the Connecticut Medical Society, who were invited by resolution to take part in the deliberations of the Society, was, we trust, but the commencement of a more extended interchange of courtesies. The precedent inaugurated by the Connecticut Society was immediately responded to by our own State Society, in the appointment of eight delegates to attend the next meeting of the Connecticut State Medical Society.

The subject of the establishment of a State Commission of Lunacy was brought before the Society, by Dr. L. B. Coates, and a series of resolutions was presented, endorsing a bill before the State Legislature, and appointing a committee of the Society to confer with the Senate committee, and urge the passage of the bill. Dr. J. McNulty suggested that the committee should examine the bill and report to the Society such alterations and amendments as they might deem advisable.

The committee, after having examined the bill, reported on the following day some modifications. Dr. M. H. Ranney, of New York, addressed the Society upon the subject, objecting to the whole bill, and calling the special attention of the Society to many points which he considered highly objectionable. At the close of his remarks, Dr. Ranney submitted a bill to the consideration of the members, which, upon motion of Dr. Sayre, was referred to the committee, with instructions to transmit the same to the Legislature, as the expression of the State Medical Society.

The report of the Committee on Medical Education, to whom was referred that portion of Dr. Brinsmade's inaugural address which related to the conferring of second degrees, was adverse to the suggestion. The report urged greater requirements for the degree as it at present exists, and suggested, "that all commencing the study of medicine should prove, by an examination, that they possess at least the basis of a good English education; a sufficient knowledge of the sciences to enable them to comprehend the principles of their application in anatomy, physiology, and therapeutics; and such a knowledge of the ancient and foreign languages as is essential to aid them in their studies, and enable them to comprehend a prescription when written in Latin." In addition, the report recommended that the term of lectures should continue throughout the year, with short vacations, and that there should be only four a day, with hospital attendance and daily examination, the final examination to be conducted by a Board of Examiners, appointed by the State Societies, or the American Medical Association. The report was ordered to be forwarded to the next meeting of the American Medical Association, as an expression of the sentiments of the Society.

Dr. E. Harris read an elaborate report of the Committee on the Hydrography of the State of New York, closing with a series of resolutions, calling upon the State Legislature to take efficient action in providing for "a comprehensive and effectual system of inquiry and sanitary advice and control, for the promotion of the public health."

Dr. E. H. Parker, the Vice-President, made some remarks upon the extensive use of opium by the community as a stimulant; and in view of the calamitous results, he urged that the Legislature should be memorialized to forbid its sale under certain restrictions, and presented a series of resolutions to that effect, which were adopted.

A large number of papers was presented, some of which were read, while others were referred unread to the Committee on Publication.

Of those read, were the following papers: On the Use of Mercurials in Acute Pericarditis, by Dr. S. O. Vanderpool, of Albany; A

Case of Suspended Animation, by Dr. T. G. Thomas, of New York; A Case of complete Inversion of the Uterus, by Dr. Van Dyck, which elicited a lengthy discussion; Dr. C. A. Lee occupying a large portion of one of the sittings of the Society in a consideration of the subject.

Another lengthy discussion followed the reading of a paper on Simple Extension in the Fracture of Long Bones, by Dr. John Swinburne, of Albany. Then followed a paper on Endermic Medication, by Dr. Bissell, of Utica; Report of the Committee on the Adulteration of Drugs, by Dr. Squibb; A Case of Poisoning by Corrosive Sublimate, by Dr. Downs; A Case of Suicide by wounding a small Branch of the Superior Thyroid Artery, by Dr. Finnell, of New York; On Compound Comminuted and Complicated Fracture of the Upper End of the Tibia, by Dr. Alden March, of Albany; On the Statistics of Suicides in New York City for 1859 and 1860, by Dr. J. G. Adams, of New York; On the Tetanic Diathesis, by Dr. J. McNulty, of New York; On Exsection of Portions of the Eighth, Ninth, and Tenth Dorsal Vertebrae, by Dr. Hutchinson, of Brooklyn; On Amputation of the Lower Extremities with reference to Artificial Substitutes, by Dr. Douglas Bly; On Amputation of the Cervix Uteri, and on the Value of Chromic Acid as a Caustic Application to the Os Uteri, by Dr. J. M. Sims; On Sub-Peritoneo-Pelvic Pregnancy, by Dr. Skilton.

Among the papers not read, but referred to the Committee on Publication, were the following: Two Pair of Twins within One Year and Five Days, by Dr. Barrows; Suspected Poison, by Dr. J. G. Orton; Bleeding in Cerebral Disease, by Dr. S. O. Vanderpool; Rupture of the Uterus, with an Account of Three Cases, by Dr. G. J. Fisher; Diphtheria, by Dr. Ferris Jacobs; History of the Madison County Medical Society, by Dr. A. L. Sanders; Diphtheria, by Dr. U. Potter; Rupture of the Womb, complicated with Strangulated Umbilical Hernia in a State of Gangrene, by Dr. C. V. Barnet; Memoir of Dr. C. Van Wie Burton, by Dr. S. D. Willard; Report of Committee on Statistics, by Dr. Orton; Reduction of Dislocation of the Femur, by Dr. Swinburne; Case of Fibrous Tumor of the Uterus, by Dr. Dayton; Bony Tumor within the Uterus, by Dr. N. C. Husted; and Memorial from the Monroe County Medical Society.

The Session closed with the election of officers and the address of the President. The officers chosen for 1862 were:

DR. E. H. PARKER, of Poughkeepsie... *President*.

" A. VAN DYCK, of Oswego..... *Vice-President*.

" S. D. MILLARD, of Albany..... *Secretary*.

" J. V. D. QUACKENBUSH, of Albany. *Treasurer*.

THE AMERICAN MEDICAL MONTHLY AND NEW YORK REVIEW.

APRIL, 1861.

ESSAYS, MONOGRAPHS, AND CASES.

On Paralytic and Convulsive Diseases of the Cerebro-Spinal System, including Epilepsy, its Physiology, Pathology, and Treatment. By H. P. DEWEES, M.D., New York.

[Read before the Medico-Chirurgical College, March, 1861.]

GENTLEMEN—On retiring from the chair, at the meeting held at Dr. A. B. Mott's, I offered for the subject of discussion, "Epilepsy, its Physiology, Pathology, and Treatment." As the habit in this College is to read a preliminary paper, I shall occupy your time only with such views as have been more recently propounded by others, and with the conclusions and results derived from my own observations, rather than by the repetition of more ancient surmises, which were founded on no scientific investigations, and which therefore offered no rational deduction for treatment.

But after considering in what manner I should treat the subject so proposed, numerous difficulties arose as to whether it should be merely taken up by a rigid adherence to the matter itself, or whether a more general and broader outline, embracing other connections and disorders,

but which are not unfrequently precursory concomitants, or subsequent complications, would not be profitably adopted. I have concluded upon the latter, and beg that you will excuse a more discursive entrance into the subject, than a mere logical adherence to the matter would permit; since epilepsy is a disorder starting from many points of induction, although the chief seat of its objective phenomena is encompassed in a strict regional boundary—the medulla oblongata. Yet, to understand in what manner this cranio-spinal portion of the cord becomes the great focal point of radiation in the manifestations of this terrible disorder, a knowledge of its central actions, and of its reflective enlistment, whether from the conducting nerve-fibres of the brain and spinal cord, or from the various viscera and periphera, is highly essential.

Therefore, in a disorder implicating so many conditions of the sensitive, motor, and psychical apparatus of the body, a clear conception of their reciprocal relations, as well as of their independent action, is necessary, in order to comprehend their disturbances, either as direct sequences, or as indirect manifestations in the course of the epileptic disorder. By this comprehension the nature of the disease will be more clearly unfolded, the premonitory symptoms will become more instructive, and a nearer approach to a scientific therapeutical conclusion can be made.

In searching for the seat or cause of any disorder of the motor nervous system, the objective phenomena should be correctly classified. A single muscle, or groups of muscles, may be affected, either by central disturbance in the ganglionic cells themselves, or by their incitement to action through eccentric or reflex conduction. This reflex incitement may reside peripherally, extra-cranial, or spinal; or, it may arise within the cranium, or in the cord itself. For instance, the point of irritation may be seated in any part of the superficies, or it may reside in the posterior spinal columns, and thence be reflected to the associated ganglionic motor origins in the anterior or true motor columns. When intra-cranial, the point of irritation may lie either in the cerebrum proper, whereby its conducting fibres are implicated, or in those portions in which the psychical manifestations originate. Every irritated sensory fibre can induce or increase reflex sensibility of the cord, by centripetal action.

In these conditions, two things are to be remembered. The motor centres may be in a normal state themselves, the inciting condition being anormal; or the conducting fibres may be in a true physiological state, whilst the motor ganglionic cells may be overexcitable, or hy

pertrophic either as to number, by which the amount of muscular action is exaggerated; or as to inherent irritability or excitability, by which the force is proportionately overgenerated.

This hypertrophic excess bears an inverted proportion to the opposite condition—viz., the atrophic. In the former, an undue supply of arterial blood may serve for the increase; or, the supply being normal, some special constituent of the blood may be in excess, or defective in quality, by which nutritive energy or functional manifestation is exalted. But, both these latter conditions are not unfrequently established, independently of any peculiar blood composition, through an irritable or overexcitable state of the conducting fibres.

In nervous atrophy, the opposite exists. The arterial blood may be insufficiently or defectively supplied, whereby the organic products are stinted, or rendered inert, although the cerebral impulse may be healthy. These states are instanced by those in whom the order or will is greater than the power or execution. Another form of atrophy is found in the executive portions of the nervous centres, from the impeded or impaired condition of the conducting fibres, or of the psychical portions of the brain. Here the motor centres fall into the peculiar changes incident to parts whose functions have been long abrogated, and which may be termed the *abuse of disuse*.

It is in these latter, particularly, that a paralytic state may exist in the structures deriving their nerves from these atrophied centres, whilst a convulsive, spasmodic, or tetanoid condition of the associated or consensual parts exists, especially when the muscles thus partially paralyzed are endeavored to be acted on by the will, the impulse being distributed through those ganglionic cells giving origin to the nerves going to the associated muscles. Reflex causative action, both peripheric and cerebral, may happen in several ways. The impression may be conveyed through the peripheral sensory filaments of the paralyzed muscle or limb to the motor centres, or it may excite involuntary contraction in the sound limb, but which can be more or less restrained by the voluntary action of the brain; or the organic system may be excited, producing static changes in the various viscera, with spastic retention or expulsion of their contents, &c.

Although these various manifestations of the nervous system relate more to the multiform states of paralyses, yet the comprehension of the anatomical dependencies and physiological relations is all-important in the study of many nervous disorders, and especially of epilepsy. But I shall endeavor, in the physical details, to mingle as much physiological and pathological result from disordered regional action as

will relieve the tedious tension of the mind, which is so apt to accrue from mere anatomical description.

The medulla oblongata is the additional intermediate organ between the spinal cord and the brain. And, in advance of entering on the subject, I will here state that this intermediate portion is without doubt the seat of the chief objective phenomena of epilepsy. From this point of radiation the muscular disturbances ensue; and whether the *punctum saliens morbi*, or point of irritation, be in the brain, spinal marrow, mucous or cuticular surfaces, yet the phenomena constituting the fit of true epilepsy must arise in great measure from the engagement of the medulla oblongata, or from its being centrally affected.

In the medulla oblongata, as in the spinal cord, a median furrow exists, interrupted by a decussation of fibres below the pons varolii. Internally, on each side of this furrow, arise the pyramidal bodies, which extend into the pons varolii. Externally, are seated the corpora olivaria, which do not extend into the pons, but are separated from it by a deep sulcus. Each olivary body is connected to its fellow by intercommunicating fibres, which arise from the ganglionic cells, to pass through the raphe of the medulla oblongata; whilst the nuclei for the hypoglossal nerves, on which the motions of the tongue chiefly depend, are in close apposition to these bodies on their respective sides. These latter nerves take their origin from a large number of multi-polar ganglionic cells. The corpora olivaria are thus anatomically connected, and become physiologically auxiliary to the hypoglossal nerves, whereby certain lingual motor combinations are effected. It may be well to remark here, that the olivary bodies do not exist in fishes, or in the amphibia, whilst in the lower mammalia they are more or less rudimental.

In other words, these bodies are developed according to the two great functions of the tongue—viz., combined movement and articulate speech. The hypoglossal nuclei lie close to each other, near the raphe, their simultaneous action being secured through fibres of intercommunication. By a like arrangement, the corpora olivaria are acted on bilaterally. The hypoglossal intercommunicating fibres are limited, so that unilateral motions of the tongue can be voluntarily excited. But, for the combination necessary for articulate speech, the bilateral harmony must be insured. Hence, in hemiplegia, paralysis of the movement of the tongue, differs from that of the combined consent for articulation and the sustained action of speech. The orders of the will must be communicated simultaneously to both olivary bodies, to secure their harmonious engagement, and that of both hypo-

glossal nerves. In deglutition the same conducting influences must be preserved.

Sustaining the results of direct experiment are the records of pathological investigation, showing that the corpora olivaria are frequently found in various morbid conditions in paralysis attended with loss of speech. And more confirmatory are the researches establishing, in cases of congenital atrophy, or of arrested development and growth in these bodies, the coincidence of aphonia, difficulties of deglutition, and more or less loss of command of the tongue. Cases have also been reported, and have been examined by myself, in which loss of speech resulted from inflammation of the pons varolii, as well as of the corpora olivaria. In the former, neuralgia is generally a prominent symptom.

But these ablations of special functions are not to be always attributed to lesions of these bodies, or of the associated hypoglossal nerves, since the defects of muscular consensual performances may be confounded with absence in the mental conception of language and memory of words; or with those lesions implicating the traditional action of the will, as when the striated bodies are impaired, and which are attended with paralysis of motion of other portions. Injuries to the anterior frontal cerebral lobes, especially, are apt to be followed by what is commonly termed imperfection or loss of speech. But in these cases the conception of language, or rather of ideas *for* language, is more impaired than the power to execute is destroyed. Nor must those cases where both the conception and the olivary function are not disturbed be confounded with those in which the *conducting fibres* are exclusively at fault. In several cases falling under my own observation, I have found that the patient could not voluntarily communicate his thoughts by speech, although the reflex movements of the tongue were perfect; yet he could do so by writing, indicating an interruption through the conducting fibres, but showing that the *conception* of language was intact. Again, I have witnessed the imitative or repetitional actions perfect, without corresponding conception; thereby evincing the integrity of the conducting fibres and of the corpora olivaria, but showing that injury to the originating sensorial portions of the brain had taken place, as was afterwards verified by post-mortem examination.

Traumatic injuries of the frontal bone, whereby the anterior portion of the cerebrum has been compressed or otherwise temporarily injured, have not unfrequently resulted in loss of speech, which has

been in some cases restored by surgical aid, or by the recession of the local disturbance.

These cases indicate the ablation of the conceptional power within the brain, and not of the capacity of performance through the olivary bodies and hypoglossal nerves. For although articulate speech is lost, yet the *voice* can be excited through reflex actions of the various surfaces, and especially by those attended with severe pain. But these centres, during long-continued arrest of the cerebral actions, are liable to fall into pathological changes, or into a physiological proportion of functional relation. Hence softening, fatty, or atrophic degeneration, induration, &c., occur, whereby not only the voluntary, but the reflective actions are lost, or rendered feeble. Even if the injury of the anterior lobes be recovered from, yet the olivary bodies are apt to undergo certain transmutations, which may abrogate their function, in accordance with the law which governs the propagation of consensual morbid states in organs correlated in function, or from the more general law which regulates the reproductive energies in parts functionally reciprocal.

The congenital cases of the deaf and dumb cannot all be placed to arrest or imperfection of development in foetal life. The injuries sustained during labor by the anterior lobes from mechanical pressure of the pelvic bones, or by the instrumental or digital manipulations, must be taken into consideration. Nor need we expect to find a direct traumatic lesion, or its indication, when examining the brain in such accidental cases; since the pressure so exerted may merely induce a change in the molecular constitution of the impinged-on lobes, by which their nutrition is disturbed. And the same may happen to the posterior occipital region, whereby the medulla oblongata and its auxiliary ganglia, the pyramidal and olivary bodies, may be damaged, since the position of the parts are constantly varying, according to the flexed or extended position of the head. In some of these cases, a mere physiological atrophy is apparently established; as, in course of time, both hearing and speech become more and more established; differing in this progressive recuperation from pathological degeneration, in which there can be no improvement. Aphonia, alternating with sudden return of speech, is not uncommon in hysterical cases; but when accompanied by persistent hemiplegia, either in the male or female, some cerebral lesion must be concluded on. In one gentleman, whose voluntary command of deglutition and of speech was constantly varied from trivial indistinctness and inability to complete loss, I found, after death, a tumor in the pons, which pressed more or

less, according to the vascular condition, on the medulla oblongata, whereby the functions of the auxiliary ganglia, the olivary and pyramidal bodies, were interrupted. In this case, the legs and bladder were at times greatly paralyzed, probably from the interference with conducting fibres in the pons, and from the pressure exerted on the pyramids, whose function apparently presides over the movement of the extremities. There was also intense neuralgia.

Visible alterations or encroachments on the cerebro-spinal structures do not always appear on autopsical examination, to account for losses of function of their various parts. The changes are those of molecular nutrition, at times scarcely recognizable by the microscope. Yet in many such cases neither proper conception nor power of speech has been destroyed, but the memory of words and of their combination is lost. When spoken to, they are slow of comprehension, or are totally deprived of intellectual translation. Yet they will imitate the sound, or sometimes repeat like an echo a portion of the spoken sentence. It is, so to speak, a paralysis of memory, and not of the organs for speech. In others, I have witnessed a complete loss of memory of the customary language, with perfect return of another for years unemployed and forgotten. But these effects are not, generally, from special cerebral disorder, although I have seen them in the hemiplegic. They happen mostly as consecutive complications in diseases of other organs. But, when happening, they are generally prognostic of fatal issue. The temporary exchange of one language for another, arising from traumatic injury, or from fever, with cerebral engagement, must not be confounded with those just cited. In the case of a young medical gentleman from Georgia, who had suffered from the effect of deep cellular pelvic abscess, accompanied by delirium, and had been ignorantly bled into deliquium, followed by violent mania, I found that he had lost the memory not only of his language, but also of his parents, friends, and letters. His education had to be begun again, from the very alphabet, and for months he made but slow daily progress. One morning, on rising, like a flash of light, all returned to him, and the comparative imbecile of the night before became the son of science once more.

Injuries to the olivary body are apt to be followed by more or less paralysis of the facial nerve, through which the expression and motion of the corresponding side of the face are interfered with, as the superior portions of the olivary bodies are connected with the seventh pair of nerves; whilst the inferior are connected with the hypoglossals, which may be included in the lesion, producing great difficulty of

speech, &c. On the floor of the fourth ventricle the facial nerves are reciprocally connected, and are united to other ganglionic groups—viz., the trigeminal, which lie between the auditory and seventh pair. To the corpora olivaria thus belongs the power to express by the movements of the face the various passions. Paralysis or section of the first branch of the fifth destroys the reflex excitement for winking on *touching* the eye; yet it may be excited by the impression of a strong light on the optic nerve, after section of the fifth, arising apparently from a connection between the roots of the optic nerves and the nuclei of the seventh pair.

The anterior spinal columns pursue their course into the brain, through the pyramidal bodies. Injuries to these bodies are attended with muscular disturbances of the extremities. The lateral columns of the spinal cord do not pursue their course into the brain, but terminate in the medulla oblongata. They are brought into action by the pneumogastric nerves and by the orders of the will. These lateral columns preside over the movements of the trunk. Hence, in hemiplegia from cerebral hæmorrhage, whilst the muscles of the side opposite to the lesion are paralyzed, the movements of the chest remain intact. From the intimate junction of the vagi nerves with the fifth pair, and the connection of their nuclei with the longitudinal fibres constituting the upper portion of the lateral columns, any irritation applied to them will bring into action the muscles of the chest and abdomen. During ordinary respiration, the normal stimulus of the carbonic acid upon the peripheral portions of the pneumogastrics is conveyed to the lateral columns and phrenic nerves, by which the combined movement of the chest, diaphragm, and abdomen is established.

When the stimulus is persistent to these columns, and through them to the medulla oblongata, the muscles of the chest become fixed as in tetanus, and respiration may be fatally stopped. The descending longitudinal fibres convey the orders of the will to the centres of respiration; so that, although ordinary breathing is due to reflected stimulus, yet voluntary acceleration or retardation of the respiratory acts can be obtained. Hence we can understand how, in certain cerebral hæmorrhages attended with palsy, that although ordinary reflex respiration continues unobstructed, yet it may remain uninfluenced by the orders of the will, from the injury to the higher conducting fibres. In hemiplegia from decussative cerebral disorder, voluntary inspiratory efforts fail to excite equal dilatation of both sides of the chest; not because the respiratory centres themselves are

damaged, *but because their action can be only unilaterally invoked*. These independent sources of respiratory conduction form, at times, a valuable basis of diagnosis.

It is to be remembered that the medulla oblongata consists (or at least partly) of the longitudinal fibres derived from the cerebrum—that is, from the corpora striata, thalami, and crura cerebri—so as to connect them with the ganglionic groups from whence the nerves of the medulla oblongata arise, in order to convey to them the orders of the will. Other fibres also leave the medulla to ascend to the seat of perception in the gray cerebral matter. The olivary bodies thus become the instruments of the voluntary acts of deglutition, even after the reflex sources from the trigeminus are interrupted. The act of swallowing, voluntary or reflex, to be correctly performed, requires a bilateral adjustment of the necessary muscles, and therefore the bilateral integrity of the corpora olivaria is essential.

Although the medulla oblongata is generally called a continuation of the spinal cord, yet there are numerous other parts which either originate in it, or are derived elsewhere than from the cord. The pyramidal bodies are to be considered as the prolongations of the anterior columns of the spinal cord; decussation of their fibres taking place before they enter the medulla oblongata, to pass through the pons varolii as the four principal columns, which serve, according to Van der Kolk, for the regulation of the extremities. There are also transverse filaments rising from the medulla oblongata, which unite the two halves, and serve to insure its bilateral action, for the movements of the face, tongue, larynx, and chest.

We will now call attention to the numerous ganglionic cells contained in the gray matter of the spinal cord. From these cells in the cortical substance originate the nerve-fibres, which do not pursue, as formerly supposed, (until refuted by Ehrenburg and Remak,) a direct course through the spinal cord to the brain. These ganglionic cells are connected in groups, in harmony with the *anatomically pre-arranged* muscular groups, by which, from a stimulus applied, co-ordinated or consentaneous movements are insured. If this stimulus is diffusive, or has a peculiar affinitive property of acting on other cells, either associated or disjoined, the groupal movements will vary from simple motion, to convulsion or spasm. And this excitative or depressive influence may be communicated directly through the blood, or through the will, or by reflective excitement. The carpo-pedal spasms of teething children—the circulation or local absorption of certain poisons, as in hydrophobia, or in the special affinitive actions

from strychnine, woorara, &c., &c., are instances of these conditions. Some forms of cerebral affections, wherein the will is preternaturally exercised through certain channels, and of hysteria from utero-ovarian irritability, whereby reflex actions are propagated, are proofs of the direct as well as of reflected impulsions.

The ganglionic cells are more numerous collected in those depots from whence the larger muscular groups receive their innervation. The medullary matter or nerves act merely as conductors of the impulse so excited in the ganglionic cells. This power, being conducted to the muscles, either adds to, or excites into action, the inherent contractility of the sarcoous elements.

It has been established by experiment, as also from symptoms during disease, that pain is not excited on transverse section or erosion of the gray matter of the spinal cord. The motor fibres for the extremities lie in the anterior columns, which are continued into the pyramidal bodies, and extend into, or receive fibres from, the brain; whilst the anterior portions of the posterior columns are received into the restiform bodies, or the peduncles of the cerebellum, whereby these bodies are endowed with sensibility. These lateral columns, as before stated, preside over the motion of the trunk. The posterior pyramidal and restiform bodies are probably derived from the cerebellum, and terminate in the medulla oblongata, by resolving themselves into numerous transverse fibres, through which the co-ordinate impulses are conveyed. But the anterior spinal columns do not merely give origin to the motor nerves. They probably receive organic filaments from the stomach and other viscera. It is well known, from vivisection or other special injuries to the anterior spinal columns, that these organs are apt to undergo certain pathological changes; whilst, from morbid irritation of the sympathetic filaments in the viscera, spinal complications have resulted.

As the pyramids pass and divide in the pons varolii a portion of the cerebellum, the transverse arched fibres passing to the restiform and pyramidal bodies probably form the conductors of the action of the will for co-ordination of movement. Pathological inquiry confirms this view: as, in injury to the cerebellum, the power of voluntary bilateral adjustment has been observed to be injured; although involuntary or reflex harmonization, as in yawning, leaping, &c., may ensue, either in the muscles whose nerves issue directly from the medulla oblongata, or in those from the spinal cord; whilst injuries of the pons varolii are found to coincide with loss of motor power of the extremities, as in hemiplegia, paraplegia, or crossed palsies, where the right

arm and left leg are affected. In cases of tumor or other growth pressing on, or developed within the pons, the symptoms vary from convulsion to irregular paralysis; or from paralysis of a single member, to the engagement of two or more, according to its extension, or the accidental vascular conditions of the surrounding parts. These may be accompanied by neuralgia or aphonia, dysphagia or vesicorenal derangements, from encroachment upon, or by irritation of, the medulla oblongata. These conditions I have seen verified on autopsy, and possess the specimen from one case.

In diseases affecting the structural integrity of the spinal cord, reflex actions not only occur, but are apt to become exceedingly troublesome, as the anterior and posterior nerve-roots are closely connected on the same level. In spinal paraplegia induced by softening, partial tabes, dissecting abscess, &c., reflex actions may be excited by tickling the foot, or by acts of defecation or urination, &c., although all direct voluntary command is lost. In some instances, the *act* of coition can be performed, although the *sensation* may not be transmitted to the brain, from the solution of continuity of the conducting fibres. Of this singular condition I have known several instances. Others, again, can only cause their muscles to contract by the voluntary effort being first excited through sight. They walk awkwardly, with their eyes constantly viewing the ground, so that the brain can be informed of the necessity for voluntary action, but they fall if their sight be interrupted, or if left suddenly in the dark; since the transmission of the impression on the soles of the feet is annulled, by which either the cerebral perception for voluntary progression is destroyed, or by the reflex actions becoming uncontrollable and purposeless. From these causes, I have known such sufferers ignorant of the position of their legs or arms when in bed at night, or at table, and who could not *rectify*, although they might *change*, their positions when wishing to do so, unless the sight could be employed for the direction. These cases are generally hopeless, and require great care in their conduction, as troubles from the bladder, rectum, and kidneys are apt to complicate the disease; whilst troublesome abscess or posture sores are of frequent incurrence. Some die, worn out by the mere local derangements of function making such vast drafts on the constitution; whilst others, in addition to these, exhibit cerebral extension, resulting from the severe efforts of the brain in effecting voluntary movements, by which more intercellular albuminous fluid is effused, productive of fibrillar atrophy, and its special results; or of softening, inflammatory or non-inflammatory, with disturbances or exaggeration

of intellect, varying from the incipient stages of mania to complete dementia or idiocy.

Although the chief seat of reflex motor action is in the spinal column, yet the brain exhibits like reflex conditions, both sensory and motor. Nor is the cerebro-spinal axis in itself merely subject to these states, as the nervous centres of organic life, from their connection with the spinal cord, may have induced in them reflex conditions, attended with disorder of secretion and nutrition. It is not uncommon, from injuries to the spine involving sensation and motion, to find the various internal organs disordered in function and changed in structure.

Most of the manifestations of cerebral function appear to be unilateral above the level of the medulla oblongata. Hence local hæmorrhagic effusion, softening, tumor, specific or other structural alterations of one hemisphere, or corpus striatum especially, induce unilateral decussative paralysis. Strictly localized *irritation* in a hemisphere may result in unilateral spasm or convulsion, unless abnormal irritability of the medulla oblongata exists at the same time, by which a bilateral action is propagated into those parts served by the nerves of that region, through its transverse fibres, or the commissures between the nuclei of the nerves, or their trunks, as in the facial, hypoglossal, &c.

The termination of the spinal sensific nerves is not in their point of entrance. They proceed upward, to terminate in the medulla oblongata. Nor do they penetrate into the gray matter of the anterior horns, the true seat of motor energy, or into the posterior horns of gray matter which appear to preside over the reflex and combined movements, and whose ganglionic cells give rise to the sensory nerves of the spinal cord. But the posterior sensory columns terminate in the medulla oblongata, and perhaps, according to recent investigations, partly amongst the group of ganglionic cells above. Hence the medulla oblongata is to be viewed as the seat of sensitivity, whilst the brain is the seat of perceptive sensation. The insensitvity of the brain proper, in its normal state, is known to every experimenter and operative surgeon.

From this arrangement for the reception of the descending and ascending cerebro-spinal fibres, the medulla oblongata becomes the focus of radiation of sensory impressions.

Although the fifth nerve is, in its thicker portion, termed a nerve of sensation, yet we must not allow ourselves to be led astray in reference to the true function of the nerve itself, and its terminations. These serve merely to convey the impressions received to the

medulla oblongata and the centres originating higher up, that the brain may exercise its function of perception. For the medulla oblongata can only be viewed as the seat of sensation when in connection with perceptivity. When the influence of the brain is cut off, the medulla oblongata becomes the seat of excitability or sensitivity. Wherever the filaments of this portion of the fifth are distributed upon an organ of special sense, the peculiar function of the part is heightened or lowered according to this relative condition. Hence we find that either taste, facial touch, smell, hearing, or sight, are influenced more or less in injury of its branches, independently of the alteration of certain secretory or nutritive actions. The fifth nerve then becomes a nerve *for*, rather than *of*, sensation. Its influence over secretion does not appear to depend so much on its own special endowment, as from its reticular connection with the organic filaments, although a reflex motor protection to the secretory surfaces is essential. Hence, severe injury or section of this nerve high up, may result in destruction or sloughing of the parts supplied by it.

The olfactory, optic, auditory, and gustatory nerves are called nerves of special sense; yet, in themselves, they do not convey to the brain the full measure of their functions for its perceptibility. This is effected through the fifth, which is everywhere distributed over the portions receiving the impression. Hence, injuries to the branches, or to the roots of the trigeminus, are always more or less attended with alterations of one or more of the perceptible functions of the organs of special sense. During insensibility, arising from pure cerebral causes, the organs of special sense may remain intact. The eye may be open and perform its office as a mere optical instrument; the ear and its special nerves may receive the sonorous vibrations, yet the focal point within the brain being disturbed, the measure of their impressions is lost. It is in this special condition of relation between the inner world of perception and the outer world of mere manifestation of function, that the sensific branches of the fifth pair hold so prominent a position.

The ganglionic cells of each organ of special sense differ from one another, and although their physical or functional actions may be correctly performed, yet the sensory transmission of the results of their peculiar offices appears to depend chiefly on the accompanying filaments derived from the fifth pair. And this special preparatory registration for cerebral interpretation seems to reside in the gangliaform vesicles, near the tactile papillæ or sensitive surfaces, and partly in the ganglia themselves, since destruction of the first of these especially, by cauterization, sloughing, or pressure, interferes with the per-

ceptive manifestation of the sense special to the part; surgical as well as experimental operations prove this, whilst medical records attest the same. My attention to the influence of the fifth pair over retinal sensitivity, and the nutritive actions of the organs of special sense, was attracted in 1843, by the results attending an accident to a lad at that time. He received a wound from a clam-shell, which accidentally cut completely through the supra-orbital branch of the fifth. Dimness of vision in the eye of that side immediately followed, whilst in the course of a few months a hard cataract formed, by which the eye was entirely blinded. In this case, I was early struck with the fact of the immediate injury to vision following the section of this branch of the fifth. It was too rapid to attribute it to alteration of nutrition, and hence I looked upon the disorder of sensory relation as the most prominent; whilst the nutritive changes, probably through injury to the accompanying organic filaments, were effected more slowly.

An impression generally exists that the brain becomes first affected during the administration of anæsthetics, by their absorption in substance into the blood. This opinion is only partially correct, as proved daily by the phenomena. All the upper portions of the peripheral nerves directly subjected to the influence of the anæsthetic agent during inhalation, become more or less rapidly impressed, by which a retardation of impressional conducting power is induced, in advance of the effect upon the brain. This, in very many cases, is consummated slowly. In some persons, the intelligent perception of surrounding circumstances remains; they can answer questions, rectify their positions voluntarily, and are conscious during the operation of not suffering pain. These conditions obtain mostly in superficial operations of parts supplied by the fifth pair of nerves, and which can be rapidly performed. In the operation on parts possessing sensory nerves from the spinal system, the absorption in substance of the chloroform or ether into the blood has to be effected. And even here, it is not always essential to carry the administration to the extent of submerging the brain. Held in the blood, the anæsthetic bathes every fibril of the nervous system, rendering both local conduction and central perception more tardy and less acute. With lying-in women I have communicated intelligibly, and have been assured that they were perfectly conscious of the uterine efforts being without pain. In these cases, the arrest of conduction resembles that produced by tumor or pressure on some portion of the tract of a sensory nerve. If, however, the etherization is carried beyond the point of local anæsthesia

to saturation, the whole brain becomes deadened, the respiratory functions decline, whilst the natural surfaces of the lungs cannot eliminate from the blood the agent which is already surcharging the brain, and which, in its retardation in the bronchial extensions, still further increases the non-conducting condition of the pneumogastric terminations, through which the necessity for aeration is communicated. Hence the central power for inhalatory movements and the peripheral impression for supply are both lessened. In some patients, this local or nervous inconductibility does not apparently precede the loss of perception. Unconsciousness is first established, whilst reflex muscular movements become greatly exalted. These are frequently mistaken for manifestations of pain, as cries are sometimes uttered and purposive actions are apparently effected. But these latter are mere groupal co-ordinations, and are similar to those seen in vivisections, where the cerebral lobes have been removed. During the complete cerebral anæsthesia the individual may revel in fancies or dreams. The brain, except in the power of outward manifestation, is active beyond its usual wont; it is æsthetic to every internal pleasure, but anæsthetic to every pain. Oftentimes, this brain revel is distorted by incomplete remembrance into apparent reality on awakening, and has given rise to statements which have resulted injuriously to the operator.

When the anæsthesia is complete, every fibre and ganglionic cell of the sensory spinal columns and of the fifth pair are locked in impassibility. Reflex muscular impressibility becomes more and more obtuse, till the respiratory centres are paralyzed, and death may stand imminently near. Yet, during all this approach of apparent dissolution, those organs whose reflective actions in part depend on the nerves of organic life still perform their duty. Nutrition is not entirely arrested. Secretions pour forth, and the uterus expels its contents. Sometimes, from the inequality of the anæsthetic effects on the right or left divisions of the sensory nervous system, or from some error of the central equilibration, one side may be inertly relaxed, whilst the other may be convulsed by reflex action.

In this light, the fifth pair, in their thicker portion, must be viewed as nerves of connective relation between the automatic sensitive centres of the medulla oblongata and the upper irritable districts, and the perceptive cerebral lobes. These special relations of the trigeminal nerves, in their connective central manifestations, can be best studied in animals without distinct cerebral lobes, or during the progressive developments in the human embryo, in whom the basilar contents of the cranium begin first to be evolved. In acephalous monsters, although

the fifth pair may be anatomically distributed to the surfaces, as instruments of impressional translation, and of excito-respiratory action, yet they do not convey any true sensation, any more than is perceived during the anæsthesia from chloroform. Although such brainless children may cry when pricked or otherwise irritated, it is merely the cry of reflex vocal action, and not of voluntary response from perception. In other words, they may cry because they were pricked, but not because they were pained. In the normally growing foetus, the cerebral hemispheres are developed subsequently to the basilar portions with intercommunicating fibres, whose office it is to submit the impressions received to the proper seats of perception, and to convert the mandates of the will, or the phenomena of the higher cerebral functions, into sensory manifestations.

From the views expressed above, a nearer approach to the interpretation of many of those remarkable and so-called mysterious phenomena witnessed in cataleptic, ecstatic, somnambule, and like states, may be arrived at. In one, all power of voluntary motion may be lost, although the perception of impressions may exist, attended with reflex movement or not. In another, the power to will is intact, but the conducting fibres are paralyzed; whilst in a third, only such tracts are exalted which convey feelings and expressions of the highest ecstasy.

Of such conditions I have seen many examples. I have seen it even affect the person unilaterally, one side being willing to move, as she would say, whilst the other could not be persuaded to follow! In most of these so-called nervous cases, there has not been found, on examination, any definite structural changes to which they could be attributed. Not even to the microscope has been revealed any marked anormality of texture or of conformation. We have, then, to conclude that a specific influence has been exerted by some anormal condition in the nutritive fluids, as known to exist in many internal disorders, and in others, induced by external administration; or, that there has been a molecular perversion of the nervous masses themselves.

As molecular changes occur by the minute incidences of the rays of light, thrown from the surrounding objects upon the staff-like bodies of the retina through the auxiliary optic nerves and tubercula quadrigemina, so does every molecule of the transmitting ganglionic vesicles and in the recipient sensory centres change, in order to record upon the perceptive portion of the brain the impressions that have been received. This property of molecular variation may be likened

to that produced by the changing beads in the kaleidoscope, in which new forms are registered upon the eye at every movement. The beads remain the same, but new figures are induced at every change of position.

Through the sensory portions of the trigeminus the varying conditions of the acts of the nerves for special sense are rendered more acutely and rapidly to the seat of perception, independently of the fibres which pass from their central nuclei to the brain. In this respect the action of the fifth pair is similar to the application of the galvanic pole by the daguerreotypist to the reception-plate in the camera, by which in an instant of time the impression is etched. It is very certain that in themselves, the mere nerve-filaments exercise no influence beyond their power of conduction, the transmutations and combinations ensuing in the ganglia and ganglionic central cells. Through the same conducting channel travel pleasure and pain, which in many instances are but variations in degree; whilst through the same cerebral filaments traverse the orders of intelligence or the wild impulses of insanity. As, in written language, the alphabet becomes its molecular basis for intelligible combination, so in the nervous system molecular perturbations convey the results to the centres of motion and of perception; and these perturbations are focalized upon, and translated by the special recipient organs, according to their inherent properties.

The recognition of this principle is of more importance than at first would be supposed, since it gives a definite substantiality for the actions of thought, in place of mere metaphysical conjecture. Nutrition, as cognizable to us, is but molecular substitution—innutrition is molecular subtraction. Disease, whether from tumor, misplaced structural constituent, or subtle poison, from without or within, is but the cumulative evidence of molecular abnormalities, be it in brain or ganglion, fluid or solid. For as there is a law of conformity, so is there one for inconformity. Oscillatory or perturbatory actions doubtless attend every corresponding impressional change in the nervous substance, attraction or repulsion ensuing in each ultimate particle, according to the laws governing the regulation of affinities. And these affinitive changes, and their results, are either normal or abnormal, typical or atypical; healthful relations attend one, whilst deviations from the sound standard follow the other.

By this method of studying and comparing the natural processes with those inducing disease, a sound scientific basis can be attained. For it is to be remembered, that pathology is but perverted physiology. They stand to each other in the organic world as do right and wrong in the moral world.

The causes working disease are to be recognized—the cumulative evidences of its seat, or of its progress, are to be rigorously scrutinized, in order to detect the individuality of the agent, as men know the type of the bird or beast by examining its nest or lair, and can attract or repel, either by supplying or denying the materials necessary for their habitation. But neither nest nor lair describes the natural habits or configuration of the animal, or would make it known when seen. They must be studied and compared together. Hence, in disease, the natural phenomena are to be contrasted with those perverted or destroyed. The accidental, as well as the precursory organic changes as discovered on autopsy, are to be carefully separated.

In no disease are the autopsical findings more unsatisfactory than after fatal epilepsy. Although expert cerebral anatomists have clearly stated the results of their examinations, yet the essential causes of the disorder remain latent. Gross anatomical lesions are confounded with causes. The vital phenomena of the normal condition, their correlations and their irrelations, are yet too little comprehended to be able to define sharply the post-pathologic additions by the act of epilepsy, from the proximate lesions. The same apparent deviations from normal structure are daily discovered in the brain, and other structural portions of individuals, in whom the departure from the normal vital phenomena have totally varied. Ossific deposits in the dura mater or falx cerebri, enlargement of the Paccionian glands, stalactite or osteophyte growths from the base or dome of the cranium, tumors, tubercles, local or diffusive softening, induration, changes of consistence and color, aneurismatic pressure, hæmorrhage, congestion, or so-called vascular inflammatory changes, with exudation or transudation, arrest of development or local hypertrophy, plethora or anæmia, and a host of other pathological abnormalities have been found, and set down as causes both of the symptoms and of death, in the cases examined. Yet these same lesions have been found, where neither insanity of perception, sensation, or of motion has attended, or were in correspondence with, the symptoms.

In the brains of the epileptic or maniacal, in whom other losses of function especially attended, many morbid conditions are at times discoverable on autopsy, and as yet no pathologist has clearly defined those findings in their relation to cause and effect. The laws which govern pathologic sequences or co-regulate morbid structural deviations, through mutual incongruities of assimilation, or through corresponding retrogression of cell-action, have not been kept rigorously in view, whilst the differential degrees between reparative excess and

reparative deficiency, or between the deposits of compensation or those of encroachment, have not been pointed out.

It is true that many expert cerebral pathologists can predict the nature and the seat of the morbid changes to be discovered on autopsy. They can foretell that inflammation, degeneration, or certain depositions will be found, and they can lucidly detail the results of the disease; yet it is equally certain that, with all their meritorious research, they have thus far failed to know for themselves or to teach others the differential morbid conditions between the proximate cause and the results. Nor, with all the knowledge gained by experimental study of the normal vital phenomena, has treatment advanced in successful antagonism to the morbid action, or with helpful assistance to the processes of reparation. Their labors so far have indicated the inutility rather than the utility of the treatment adopted; so that the remedial basis is at this day more of restriction than of active interference. Experimental as well as clinical observations, however, have shown that, as far as certain objective phenomena extend, they may be produced by, or are incurrent with, opposite conditions of the system. Thus, convulsions and other nervous manifestations may attend the reverse states of plethora, anæmia, &c.

The premonitions of the epileptic attack are various. They may issue from the organs of intelligence, of sense, or from the centres of locomotion or of function. So regular are these premonitions in some, that they will quietly announce and prepare for the convulsive stage. Others will exclude themselves, and pass through the attack unobserved. Unnatural conditions of taste and smell may afford timely intimation, or noticeable disturbances of vision and hearing may precede the seizure. The organic system in some is at fault, and evinces, by insufficiency or derangement of secretory action, the antecedence of the nutritive disturbances to the muscular engagement. Excessive or decreased micturition, sometimes accompanied by scalding; salivation or buccal dryness; acrid discharges from the nostrils or bowels; bitter, unsavory regurgitations, or seminal discharges, with or without dream, may give unerring signals to the afflicted.

Psychical changes more or less rapidly ensue in others. There is a misconception of time, place, and space. Errors of impersonation, or of the relative condition of rest and motion, occur, wherein all self-identity is lost, or others are clothed in unreal forms. Many are filled with visions of happiness for themselves, whilst they see their friends doomed to unutterable woe. Passions dormant during health, or restrained by moral force, burst forth with uncontrollable violence,

with risk to themselves or others. The timid become brave, the gentle become murderous, or the conscientious become unscrupulous and surreptitious. There is no phase of the human mind that may not either precede or follow the attack, and the knowledge of these conditions is most valuable in forensic as well as in clinical medicine.

In others no such warnings exist. The loss of consciousness is immediate, whilst convulsive struggles pervade every muscle; or beginning with facial distortion, extend regularly from the upper to the lower extremities, whilst the trunk is writhed backward and forward, or from side to side. Frequently the loss of consciousness is preceded by facial spasm or drawing of the head to either shoulder, whilst the shriek, so peculiar to epilepsy, announces the reflex engagement of the larynx and chest. Many dash rapidly forward, or run staggeringly backward, and fall violently on the face or occiput. In others a twitching of the muscles, with gradual rigidity of the limbs and trunk, precede for a second or two the more manifest tension of the muscles of the neck, by which the large venous channels are more or less impeded, whilst the glottis rises high towards the chin with a stridulous noise, produced by the reversed action of the diaphragm and by the intercostal muscles, from the increasing demand for air. The eyes protrude, or are moved from side to side, or upward and downward, with inconceivable rapidity, whilst the lids are opened or shut with spasmodic quickness, or are widely retracted. The mouth is distorted, the teeth are ground crushingly together; a thick foam is shot from the lips by the explosive contractions of the diaphragm, or it wells over the chin, streaked with blood from the bitten tongue. The integuments of the head, face, and neck are gorged with venous blood; the head is drawn rigidly back on the upper portions of the occiput, raising the shoulders in an arch from the ground, whilst the respiration is short and struggling from the tetanic fixing of all the muscles of the trunk and of the glottal aperture. The heart throbs violently; the bowels and bladder may be evacuated, and not unfrequently semen is ejaculated. Some die at this time of the fit from the fixing of the respiratory muscles; whilst in others, the high carbonization of the blood appears to subdue the nervous centres, and relaxation of all muscular tension ensues. The respiratory movements languidly recommence; the heart becomes less wild; the swollen veins assume their natural calibre; the countenance becomes pallid, although disfigured in some by dark ecchymotic effusion from the ruptured capillaries; whilst the mouth is relaxed, and the swollen, lacerated tongue fills its cavity. This is the "grand mal" of the French. The re-

newal of the fit may ensue suddenly, the duration varying according to the exhaustion of the nervous centres, and the contractile condition of the muscles themselves; or the interval may last from hours to months. Sometimes the injudicious and busy interference of the bystanders may again arouse, by reflex actions, the irritability of the centres, and fit after fit may be repeated, which otherwise, by cautious rest, might not have been excited.

In some attacks, when the spasms are about to relax, the involuntary muscles especially, and functions which were held in antagonistic submission, may evidence, by an overexcited physiological condition, their participation in the disorder of the nervous centres; vomiting, or other evacuations, hoarse, spasmodic coughing, screaming, phrenzied exclamations, or mad ragings, alternating with ecstatic vociferation or sputtering garrulity, may ensue. In others, the muscular paroxysms cease suddenly, and the brain instantly reacts. The previously distorted face becomes calm, the limbs assume positions of languor, and the patient, as though suddenly awakened from sleep, with a look of bewilderment repeatedly asks, "What it is all about!" when, admonished by the wounded tongue, and by the exhaustion of the aching muscles, he becomes conscious that he has just passed through an attack. Others, again, gradually emerge from unconsciousness into sleep, and many times are ignorant of having gone through the fit; or they pass from stupor into the heavy stertorous sopor of the apoplectic, which, after a time, again blends itself into calm and refreshing sleep.

The intervals between the attacks vary. Sound and vigorous health is enjoyed by some, whilst others, passing their time in constant dread, become peevish and irritable, or dull, morose, and selfish, with evident alteration persistently accruing in the cerebral functions. The temper becomes uncontrollable, thoughts explode as it were in the brain, and drive the unfortunate victim into expressions and acts beyond his power of resistance.

The epileptic attacks, by which the nutrition of the brain was first deranged, may cease in frequency, leaving the memory permanently weakened, or the higher intellectual faculties completely sapped. In others a reverse condition may ensue. The irritability of the reflective centres apparently subsides, whilst exaggeration of the cerebral functions increases. The memory and intellect assume greater power and vivacity, till the very confines of insanity are reached. But suddenly the attacks, which had been submissive to the irritation accruing in the upper brain, burst forth again; whilst the mind loses its excitement and tenacity, and debility bordering on general loss of volun-

tary motion or power pervades the body. A mid condition of these two states sometimes exists. There is an alternation betwixt insanity and epilepsy. The irritability of the intercommunicating fibres takes place, so that from any undue action in the brain, either of anger, joy, or fright, or from any unusual amount of muscular expenditure, paroxysms of insanity or of epilepsy may alternately ensue.

It appears impossible to discover in some cases of epilepsy what are the disturbing or exciting causes. But whatever may be the errors in secretion or of nutrition, it is necessary that the medulla oblongata should be in an already irritable state, or that this condition should be readily impressed. The centripetal points of irritative induction vary not only in different cases, but even in the same case. And where this impressible habitude exists in the medulla oblongata, or in the irritable districts above, a mere touch, especially when the conservative actions of the brain are withdrawn, as during sleep, or during intense application to any one thing, will serve to bring on the attack, the patient leaping, or rather springing like a fish, out of bed upon the floor. A misstep which either shocks the spinal column, or from apprehension calls suddenly on the co-ordinative regulation of the muscles, will sometimes be sufficient to induce a paroxysm. In one or two cases falling under my notice, the patients have stated that they were conscious of the commencement of the convulsive stage before losing their recollection. Others will say that they were "conscious of having become unconscious." In one case of this kind, this brief condition was rapidly followed by violent intertwining of the feet and legs, accompanied by grinding of the teeth, and with tumultuous action of the heart before sleep, or in the morning as just waking.

It is from their relation to paralysis, insanity, or imbecility, that the culminating issues or sequelæ of epilepsy become so anxiously interesting to the physician, and so fearfully dreaded by the patient and his friends. In no disease are the relations between the corresponding or associate functions of the brain more strikingly defined than in epilepsy. In the early conditions, either in childhood or more advanced life, idiocy may attend. The injury by which the intellectual functions are amerced may or may not induce paralysis. The result is as much a matter of situation, as of condition of nutrition. But when, with the early mental insufficiency, there exists muscular invalidation merging from complete paralysis of voluntary motion from certain destructive causes, into muscular atony from arrested cerebral development, or from defective nutrition, then the recognition of the laws mentioned in the foregoing portions of this paper must be made, in order to arrive at

therapeutic as well as at diagnostic conclusions. Although it is true that many idiots are neither paralytic nor epileptic, yet it is equally true that these conditions are sometimes combined. And the same pathologic correlations exist in the deaf and dumb, (the statistical data of which I am ignorant.) But of the generalization of the law I am certain, having under my knowledge wherein, from intermarriage, epilepsy, insanity, paralysis, and idiocy exist in the same family. Thus seeming to prove that diseases are as progressively related as are the successive developments followed out in the animal creation. In the individual, diseases are intercurrent or consecutive; or they are non-intercurrent, and sometimes antagonistic. Of this every experienced physician and surgeon must have seen examples.

During the attack of epilepsy in those previously paralyzed, the phenomenon of convulsive movement may occur in the limbs, which had been long immovable by the orders of the will.

Sometimes an individual is attacked by cerebral paralysis with epileptiform convulsions, which may sooner or later assume or merge into the periodic seizures of epilepsy. In these cases, it is not uncommon to find either great hebetude or irritability, which may gradually pass into meaningless idiocy, partial dementia, or acute mania; and these resultants may accrue from mere physical causes, or from direct morbid extension, or from some deviation in the integral nutrition of several special portions of the cerebral lobes. This deviation of nutrition may be marked as hypertrophic or atrophic; or it may be only recognizable by the objective changes in color, softness, or density. They may coexist with inflammation, with intercellular albuminous exudation and fibrillar displacement or adhesion, attended or not by membranous implication.

These conditions are not merely persistent in those in whom epilepsy has followed an apoplectic seizure with paralysis. They may also be found in those in whom the epileptic phenomena have preceded the apoplectic. In minor degree they may accompany epilepsy alone, being probably as much resultants from the intracranial disturbances caused by the convulsive efforts, as from any peculiar morbid action. In some epileptics, the cranial bones are found thickened and eburnated, whilst bony excrescences from mere roughness to exostotic growths, from the vault or base of the skull, may encroach on its contents, and become sources of irritation or of progressive disease. Commonly, ossific deposits exist in the dura mater and falx cerebri.

The convulsions occurring during childbirth are, in many instances, epileptiform. The reflex sources from the irritative propagation

through the uterine nerves especially are sufficient of themselves to induce convulsions. But owing to the immense demand on the function of the medulla oblongata by the fixing of all the muscles of respiration during the propulsive strainings, the conditions which have been referred to as inductive of epilepsy may be established. If the medulla oblongata has been already irritable or impressible, convulsive movements are more readily induced. Besides these regional disturbances, certain changes at times occur, not only within the brain, coincidental with the uterine development apparently in some, and during the parturient efforts in others, but also on the inner portions of the skull itself. These changes are the exostotic impingements found on the inner cranium of puerperal women. The changes within the brain are mostly vascular, or from intercellular albuminous effusion. The paralytic conditions after childbirth, as well as the convulsions or eclampsia during or before birth, are at times attributable to these states. When costal exostoses take place, the various neuralgic pains or local spasms are referrible to their irritation of the neighboring nervous filaments.

In the other cases, previously referred to, the vascular changes vary from lessened or obstructed calibre to aneurismal dilatation. In some the corpora striata, the thalami and cerebellum, have been found extensively diseased or evidencing hæmorrhagic changes, which have, by their impairment of function, indicated their lesions previously or coincidentally with that of the medulla oblongata. As above remarked, during the epileptic attack the limbs that were paralyzed for voluntary motion may be convulsed, and the face, whose expressionless apathy masked every emotion, may start into spasmodic life and purposeless motion. In the aphonic, the voice, long unused to articulation, may issue in wild shrieking, from the reflected action of the medulla oblongata. The sensific centres, both spinal and cranial, may be premonitorily affected, and before consciousness is lost may agonize the sufferer with unbearable pain, till the suffocating spasms, by inducing anæsthesia, destroy all perception, whilst the body is writhed in every possible contortion by the violence of the reflex actions.

Although by many epilepsy is considered to be attended by unconsciousness, yet from my own observations this opinion is to be received with reserve. Epilepsy, like other disorders of innervation, has its degrees; and although unconsciousness may attend or usher in the convulsive stage in most severe attacks, yet I have seen cases in which the spasmodic muscular exhibitions were most powerful, without the perception of the surrounding conditions becoming effaced. It is true that the nervous centres of motion, being so engaged by the action of

the disease, they cannot be made amenable to the orders of the will, yet the perception of this condition may be manifest to the patient.

The varieties of the attack greatly depend on the anatomical seat of the affection. In some, the involuntary or reflex expressions of the passions merely take place; the upper portions of the corpora olivaria, which are connected with the nuclei of the facial nerves, being the demonstrative seat. It may embrace the nuclei of the hypoglossal, causing the tongue to be convulsively moved. In others, there may be mere spasm of the extremities, from irritation or lesion of the corpora pyramidalia, extending into the anterior spinal columns, or from some congestive irritation of the corpora striata. The objective symptoms may be the resultants of the combined states just mentioned, or there may be merely partial spasm from regional exclusions; and these regional exclusions have lately been pointed out by Van der Kolk, in his observations on these patients who bite or do not bite the tongue, to which reference will be hereafter made.

The influence of the medulla oblongata over the calibre of the minute vessels, especially through the vaso-motor nerves, by which the supply of blood to the whole brain is diminished or increased, is not to be forgotten. And here, although the primary conditions were in this upper spinal portion, yet the immediate objective symptoms are of apparent cerebral origin, since vertigo and loss of consciousness are the only recognizable conditions.

(To be continued.)

Diphtheria—An Unsuccessful Case of Tracheotomy, and a New Method of Treatment, Exemplified by Four Cases. By JNO. O. BRONSON, M.D., late Professor of Anatomy in the New York Medical College.

The many methods which have been followed in the treatment of the disease under consideration seem, as far as my observation leads me, to be possessed of no very distinguishing characteristics one over another.

The one prevailing idea is, the evident prostration and the seemingly necessary tonic course to be pursued. The results which have followed my efforts in the treatment of the disease, governed by this idea, have been so unsatisfactory, that I have been led to mark out and pursue an entirely opposite course. In the case first mentioned, and in which tracheotomy was performed, the tonic course was pursued, and, as in nearly all previous cases, without a favorable result.

CASE A. *Tracheotomy Performed.*—On Sunday, December 23d, 1860, I was called to see one Daniel Horgan, æt. 4 years and 7 months. He had been ailing for about a week, though running about until the day previous to the summons. He had had a cold, and complained of a sore throat, for which his mother had given usual domestic remedies, without any good effect. She therefore sought advice.

The little fellow was suffering with an inflammation of the mucous membrane of the pharynx and larynx. Diphtheritic patches were developed upon the tonsils and on the posterior wall of the pharynx. Prostration severe. Pulse 126. I prescribed tinct. ferri mur. and quiniæ sulph. To the inflamed parts argent. nitras., in solution, was applied.

On the following day, the little patient was not less prostrated. The diphtheritic exudation had extended but little, if any. The treatment was continued, and wine whey ordered.

25th, (*Christmas Day*).—Called at 8 A. M., in response to renewed summons. Patient much worse. Prostration extreme. Great obstruction to the respiration. Fauces completely lined with exudation, which had undoubtedly extended into, and perhaps beyond, the larynx. Pulse 146.

Believing my only hope to be in tracheotomy, I proposed the operation, which was acceded to by the mother.

Having obtained assistance, at ten and a half o'clock I again visited the patient, prepared to operate. The lips and countenance of the little patient, by their livid hue, betokened early suffocation. Assisted by Messrs. J. E. Steele and F. G. Stanley, medical students, I performed the operation speedily, with but trifling loss of blood, and with immediate relief to the patient. A considerable quantity of false membrane found exit through the wound, and after the introduction of the tube, the child soon began to rally, and seemed better than for the two days previous.

Potass. chloras, quiniæ sulph., and brandy were prescribed. At 3, and again at 9 o'clock, observations were taken, and he had improved. Respiration easy. Expectoration of tenacious mucus very considerable. Pulse 130.

26th—*Morning*.—Slept well most of the night. Respiration free. Expectoration as the day previous. Pulse 126. The treatment continued.

Evening.—Condition generally as in the morning. Expectoration, however, diminished. Pulse 130.

27th—*Morning*.—Expectoration much diminished. Respiration labored. Symptoms like those present previous to the operation ap-

pearing; pulse 140. It is evident that exudation has produced the fatal membrane in the bronchial tubes.

Evening.—Further efforts deemed unavailing.

28th.—Died at five A. M.

Examination fourteen hours post-mortem. Rigor mortis complete. In laying open the thorax, the lungs did not collapse; pulmonary emphysema general. Larynx, and portion of the trachea above the point of entrance in the operation, completely filled with false membrane. The portion of trachea below the above-mentioned point exhibited an ulcerated condition. The bronchial tubes, as far as into the fourth bifurcation, were lined with the characteristic exudation, at many points to the extent of entirely closing the canals. Upon making examination of the wound, there appeared to be no secondary exudation.

CASE B. *Adult.*—On the second day of January, 1861, I was called to see Mrs. C., a native of this city, æt. 30. She had been sick for several days, and was getting worse. She was of a weak habit. I found her with a flushed face, hot skin, sore throat, and anxious expression; pulse 145. An examination of her fauces evinced the presence of diphtheritic membrane on both tonsils, and on the palate.

Having concluded previously to institute a new method of treatment upon the presentation of the next case of the disease, I prescribed as follows:

	R.—Tinct. aconit. rad.,	3ss.
	Aquæ puræ,	℥iv.
M.—Sig.	Cochl. parv. quâque horâ	sumendus.
	R.—Ammoniaë mur.,	℥ij.
	Aquæ pur.,	℥vj.
M.—Sig.	Garg. quâque duo horis	utenda.

On the 3d, I found the patient improved to this extent—skin cool, pain much diminished, deglutition much easier; pulse 120. Treatment continued.

On the 4th, still more improved; pain but slight, skin natural. One small spot of exudation three-eighths of an inch in diameter present in the fauces; pulse 98. Treatment continued.

On the 5th, throat entirely clean. Inflammation entirely gone. Aconite to be taken only once every three hours; the gargle as before, every two hours; pulse but 80.

On the 6th, the condition of the patient such, that tonics and stimulants could be used with hopes of success. I therefore prescribed as follows:

	R.—Quiniaë sulph.,	℥j.
	Ferri sulph.,	xij.
	Ext. nucis vom.,	gr. vj.
M.—In pil. xx. div.	Sig.	Unam ter in die capiat.

Wine whey, and such articles of solid food as desired, ordered to be taken.

From this time onward, everything progressed most satisfactorily, and the patient was discharged in a few days.

CASE C. *Adult*.—On the 17th of January, but a few days subsequent to the preceding case, I was called to see Mrs. P., also a native of this city, æt. 58. The condition of the patient was very similar to the condition of the previously cited case. She had not been so long sick, and I found the diphtheritic exudation on the left tonsil to be less dense than elsewhere. It presented the appearance of a frosted spider's web, and seemingly was more tenacious than that fully formed.

The prescription was identical with that used in the preceding case, and the result was even more perceptible. In thirty-six hours the membrane had entirely disappeared. The pain, which at first was present in the throat, was banished at an earlier period than in Case B. The after-treatment was identical in character and in result.

CASE D. *Infant*.—On the sixth of February, 1861, I was summoned to the bedside of a little girl, the daughter of Mrs. D. The condition of the child was very similar to Case A, but with less laryngitis; pulse 150. Hoping to meet with like effects from the use of the same remedies used in Cases B and C, I prescribed the aconite, with this modification: (the patient was but three years and six months old, and consequently could but receive a proportionate dose of the aconite, with any hope of success.)

R.—Tinct. aconit. rad., gtt. vj.

Aquæ, ℥jv.

M.—Sig. Cochl. parv. quâque horâ capiat.

The gargle was used as a lotion, by means of a probang, not diluted.

On the 7th, a great part of the exudation had disappeared from the fauces. The pulse of the patient had diminished to 105, and in every other respect improvement was evident.

On the 8th, the pulse had come down to 90, and the throat was perfectly clean. A diminution of all the symptoms was present, and everything betokened a result similar to the preceding cases. With wine whey only as a tonic, I was pleased to find the little patient put on its wonted strength, and assume its former health.

CASE E. *Adult*.—I mention this case because it resembles the cases marked B and C, in respect to time and the disappearance of the exudation.

On the first of March I was called to see a young lady, æt. 20, a na-

tive of France, having been in this country about eighteen months. The general condition of the patient was more extreme than that of the aforementioned cases. Skin hot, dry, and flushed; throat swollen and painful; diphtheritic exudation present on both tonsils, and on posterior wall of pharynx. Pulse 153.

I considered the aggravation of the symptoms attributable to the torpid condition of her bowels, which had existed for some time. I prescribed ten grains of blue mass to be given at once, and followed in eight hours by six ounces of the solution of the citrate of magnesia. As soon as the bowels were freely emptied, the same remedies prescribed in case B were ordered. In thirty-six hours the patient's condition was such that I felt that the remedies were almost specific. In forty-eight hours all exudation had disappeared from the fauces, and the pulse, from 153, had come down to 85. All pain had left the throat, and one small spot alone showed signs of inflammation. On this spot I applied a piece of the sulphate of copper, simply as a stimulant. It was probably not necessary. On the following day all symptoms of anything like *disease* were gone.

I prescribed as follows, the patient seemingly having a sufficiency of iron in her system:

R.—Quiniæ sulph.,	℥j.
Zinci valerianat.,	℥j.
Ext. nucis vom.,	gr. vj.
Aloes socot.,	gr. v.

M.—In pil. xxiv. div. Sig. Unam ter in die capiat. Wine at dinner made up the complement of directions, and in three days' time all evidences of disease or debility had disappeared.

It would afford me much pleasure to have introduced a larger experience in the treatment of infants after this mode, yet I believe that the early and agreeable change which followed in the one case reported so similar to the adult cases, is evidence of almost a uniform result. We are all well aware that the system bears up better under, and reacts quicker from, a condition of depression, than of excitement. I deem the constitution of children poorly prepared to bear the stimulus and tonic remedies usually administered in the treatment of diphtheria, and if called upon to give testimony in reference to the matter, I should, from my convictions, be obliged to say, that I believe many succumb to *treatment rather than to disease*.

A Case of Hysterical Cough. By JOHN PRIESTLEY, M.D., New York.

Mrs. W., aged forty years, married fourteen years, has never had a child; temperament nervous; color florid; general health moderately good; rather deficient in intelligence; eccentric in her habits. She has a singular manner of repeating several times in succession the same sentence; as, for instance, after making a remark, and before there is time to answer it, she will repeat the identical words three or four times in rapid succession, her conversation being mostly carried on in this style.

During the winter of 1860, and also in the month of February of this year, she was subject to a peculiar cough, which I find difficult to describe, so as to be understood. I have found no recorded case which presented any description similar to it. It was neither a cry nor a laugh, but something between the two. It was extremely painful to listen to, and was so severe as to disturb the whole house. At night, when the streets were less noisy, she could be distinctly heard in the street, and the sound was so loud as to alarm the neighborhood. The annoyance finally became so great that she was obliged to leave the house and go to a more secluded part of the city.

Upon examination, I could detect nothing abnormal about any of the organs or their functions. Auscultation over the larynx, trachea, and thorax revealed nothing. The respiratory sounds were regular and natural. There was no expectoration, and when the paroxysms had ceased, she felt perfectly well. The cough at times was very persistent, so that she was quite fatigued from want of sleep. When free from cough, her digestion was good, skin and pulse natural, no headache. During the paroxysms of coughing, however, there were symptoms of suffocation; the face became deeply suffused, eyes protruding, expression of countenance anxious and beseeching, and the hand was carried to the neck, as though there was an impediment to the breathing in the larynx and trachea. Altogether, at the time of the paroxysm, the case seemed one of the most urgent.

Not having met with a case in any respect resembling it, and the patient being opposed to a consultation, I treated her in a manner as I thought was required by the character of the symptoms. I administered in succession the various antispasmodics, with and without tonics, applied croton oil, and empl. lyttæ over the thyro-cricoid region, and in turn used every remedy I could think of which seemed to offer any plausibility in its administration. My attendance upon her continued

in this manner three weeks, without resulting in any relief. The paroxysms still continued, and the strange, shrill, screeching noises, night and day, became a terrible thing for her friends and neighbors.

The curious habit of repeating the same words over and over again, the apparent deficiency in her intellectual faculties, a vacant stare of the eyes, and receding forehead, gave her a decidedly idiotic manner and appearance.

I could learn but little of her early history. All the information I could get from her husband, who was not a very observing man, was, that he had never known her to be sick; that she had never had convulsions, or any nervous disease, such as are manifested in epilepsy or chorea. From these data, and other inquiries made concerning her, I could not satisfy myself as to any direct or indirect cause for the curious symptoms presented in her case.

The sensations experienced by her during the paroxysms were, she said, those of suffocation. While the paroxysm lasted, she would grasp the larynx with both hands, and then the symptoms I have described would occur—the flushed face, the protruding eyes, and peculiar cough. This would last for half an hour at a time, and, with short intervals, would continue, principally at night, from 10 p. m. to 6 a. m.

Presuming, from the train of symptoms, that the sensory or superior laryngeal nerve was more or less associated with the sense of suffocation and cough, I thought that an application of a strong solution of nitrate of silver, made to the root of the tongue, the rim of the glottis, and lining membrane of the larynx, might be of service in allaying the sensitiveness of these parts, and I accordingly applied it, of the strength of $\mathfrak{z}\text{j}$. of the salt to $\mathfrak{z}\text{j}$. of water. The first applications immediately reduced the number and violence of the paroxysms, and after four days' application, morning and evening, the distressing symptoms were completely removed.

In February last, one year after the first attack, she was again seized with exactly the same symptoms, without any known exciting cause. I at once cauterized her throat and larynx with the same strength of the solution of nitrate of silver as before, and succeeded in overcoming the cough after the third application. She still remains quite well, without any renewal of the cough.

The exciting cause of the paroxysms still remains unknown to me. There is no disease of the larynx, trachea, or lungs, for the moment the paroxysms cease, the voice becomes clear and natural, the respiration quiet and normal. Nor is there any disturbance upon the

part of the digestive organs, no dyspeptic symptoms; the appetite being good, the tongue clean; no headache, nor flushing of the face, except during the paroxysms of coughing. Menstrua regular, and, so far as I could ascertain from close inquiries made of the patient, positive absence of any uterine troubles. I made no vaginal examination. No tenderness nor apparent disease about the spine.

In the absence, therefore, of any intelligent cause for the curious and urgent symptoms presented in this case, I was forced to classify it among the anomalous nervous manifestations, and consequently applied such therapeutical resources as the antispasmodics and tonics afford, but without any favorable result. From these I experimentally passed to local applications to the larynx, which happily relieved my patient.

Transactions of the Medical Society of the County of Kings.

MARCH, 1860.

Absence of Epiglottitis—Deglutition Normal. By DR. ENOS.

Mrs. M., æt. 33. Had been in good health till three years since, when she had inflammation of the fauces and larynx. She was attended by Dr. Batchelder, of New York, who applied a solution of nitrate of silver; she having come to reside in this city, was still attended by Dr. B. I saw her first about two weeks before her death. She was quite weak—could only speak in a whisper. This loss of voice had been, so she said, for two years, and was not owing to weakness, but to disease of the larynx. Respiration now was difficult; both inspiration and expiration prolonged, labored, and noisy. She had some cough, and was nervous. No enlargement of the larynx externally, and no tenderness on pressure. The stridulous respiration prevented a satisfactory examination of the chest. An asthmatic wheezing seemed to pervade the lungs throughout. Chest resonant; she had a little fresh bronchial cough, and raised some mucus. Dr. B. saw her with me at 2 P. M.; she was no worse, apparently; in the evening I was sent for, and found her dead. The mucus was poured out more rapidly; this, together with the small larynx, caused her death by suffocation.

Post-mortem examination showed an entire absence of the epiglottis, caused, doubtless, by ulceration, as there was a hardened cicatrix in its place, at the end of the hyo-epiglottic ligament. The same hard, uneven structure existed in the place of the epiglottidean

folds, which were wanting. This same hard, knobbed, and contracted condition extended into the ventricles and laryngeal pouches. The true vocal cords and the aretenoid cartilages had also been so changed by the disease as to diminish much the area of the rima glottidis. The aphonia is accounted for by the inability of the larynx to perform its normal functions, and the dyspnoea by its diminished capacity. An acute inflammation was found to have existed in the mucous membrane of the trachea and bronchi.

She had had no difficulty in swallowing either solid or liquid food. This case illustrates, therefore, the physiological fact that the epiglottis is not necessary to prevent food from entering the larynx in the act of deglutition. It is well known that birds have no epiglottis, and that dogs and other animals, from which the epiglottis has been purposely removed, have no difficulty in swallowing either liquids or solids. This closure of the glottis in deglutition is mainly effected by the contraction of the inferior constrictor muscle of the pharynx; being inserted into the posterior border of the thyroid cartilage on either side, its contraction approximates these sides, thereby closing the chink of the glottis, at the same time food is forced on towards the stomach.

There was no evidence that the disease was syphilitic.

REGULAR MEETING, APRIL 25TH, 1860.

DR. MARVIN reports a continuance of an epidemic false measles—*rubeola sine catarrho*—in which the eruption resembles precisely that of true measles, and is attended with sore throat and a slight fever. The cases terminate favorably in about five days. Has no relation to true measles, occurring as well in those who have previously had measles, as in those who have not. Has never seen sore throat so prevalent as during the present season. More or less cases of *scarlet fever* constantly under treatment.

DR. MITCHELL also reports a large number of similar cases coming under his own observation. Also of sore throat, attended with fever and redness of the skin, somewhat resembling scarlet fever, and during the first two days not distinguishable from that disease. The disease terminates in from three to five days, and does not appear to be contagious.

Also, an epidemic sore throat with fever, the febrile symptoms running high during the first two nights, (in children, at times amounting to delirium,) and then gradually subsiding, the patient being about on

the fourth day. He has also seen several cases of scarlatina, in which, generally, the amount of *eruption* is much less than usual.

DR. DUDLEY reports a case of measles occurring a second time in the same patient, attended with choryza, cough, and the usual catarrhal symptoms of true measles. Dr. Marvin inquires whether the eruption appeared first on the face, and gradually extended over the body, or whether it appeared over the whole surface at once. This character had not been observed, and it was suggested that the appearance of the eruption in the throat would be diagnostic between true measles and false measles, with catarrhal symptoms from cold.

DR. DUDLEY mentioned the occurrence of cases of pneumonia, but of a mild character, and yielding to simple measures. Also, a case of scarlatina supervening upon whooping-cough, in which the spasmodic cough was relieved on the supervention of the eruption; when the scarlatina subsided the whooping returned.

DR. MARVIN related an instance in which a father, mother, and sister, in one family, had small-pox. An infant of eight months, nursing the mother sick with the small-pox, was vaccinated every day for sixteen days, but without success. *The infant took neither the kine-pox nor the small-pox.*

DR. MITCHELL related a case of insusceptibility to kine-pox in a young lady, sixteen years of age, whom he vaccinated three times without success. The patient then informed him that she had been vaccinated a great number of times, but always unsuccessfully; that the operation had been repeatedly performed in Boston, New York, Philadelphia, and Charleston. The patient was taken to a child who had been vaccinated five days previously, and the virus transferred directly from the arm of the child to that of the patient, *resulting in a perfect vaccination. Virus taken the fifth day after vaccination is more active than when taken later*, and if used before it has time to become dry, will communicate the disease where there is any susceptibility to it.

DR. NORTH reported four cases of diphtheria, which were followed by *paralysis*, still further retarding the *usually prolonged* convalescence in this disease. In one case there was hemiplegia, with the loss of sight of one eye. In the other three cases defective locomotion, the patients complaining that they could not prevent "stumbling," though they felt well and strong otherwise.

As to *treatment*—tonics and stimulants internally were found most useful.

DR. BRADY used as a gargle and topical application to the throat,

hydrochloric acid, chlorate of potash, and calomel dusted upon the part. Dr. Smith used the muriated tinct. of iron, in full strength, with the sponge probang. Dr. North had used with good result the tinct. of iodine to the throat with the probang.

Dr. SCHAPPS asked if scarlatina was epidemic, stating that he had some cases. Drs. Leighton, Hawley, Brady, Smith, and North were attending cases, and supposed it to be on the increase.

Dr. NORTH asked whether it was not an unfavorable symptom in scarlatina, when an eruption of a "*measley*" form appeared, stating that he so considered it, and invariably stimulated his patients under such circumstances, without waiting for further developments. Dr. Brady, in answer, gave a brief history of a case as follows: a little girl, $3\frac{1}{2}$ years of age, well fed and nourished, was lately taken with the general premonitory symptoms of scarlatina, such as great thirst, heat of skin, redness of throat and tongue, accelerated pulse, &c., &c., yet with no delirium, and no apparently serious symptoms, other than an *extremely anxious countenance*.

The second day a large "*measley*" eruption made its appearance, other symptoms as before.

Third day, morning, pulse 110, throat quite sore, but on the whole apparently better; at half-past one P. M. same day, pulse the same as in the morning, skin hot, but moist, intellect *clear*, child spoke pleasantly and naively to the Doctor as he entered, and appeared to be doing well. But in about three hours she aroused from a somewhat restless sleep, seeming troubled and uneasy when she was taken up by her mother, and suddenly expired.

The treatment had been mild and *expectant*, and the death was wholly unlooked for.

A Case of Strangulation of a Multilocular Encysted Ovarian Tumor with Rupture of the Cysts, and Escape of Contents into the Cavity of Peritoneum. Reported by DR. JAS. CRANE.

I was called on Wednesday, the 21st of December, 1859, to attend Mrs. ———, in her third labor. Up to this period, she had been in apparently excellent health. During the preceding night she had been restless, and frequently changed her position from one side to the other. At 5 A. M. she was suddenly attacked with pain in the left iliac region, which she described as agonizing in character, and extending down the left thigh, and across the supra-pubic region. When I visited her at 9 A. M. she was lying upon the left side, and I found that any movement of the body aggravated her sufferings. Her labor

was just then commencing, and all things proceeded naturally and regularly. The countenance was flushed, but the pulse, skin, and temperature were natural. Indeed, nothing unusual was noted, excepting the pain in the left iliac region, which gradually disappeared as the labor progressed. She was safely and easily delivered at 5 P. M., at which time there was no tenderness or local uneasiness discoverable. I remained with her some two hours, during which time she continued to be quite comfortable, except from the occurrence of an occasional after-pain.

December 22d, 9 A. M.—The patient passed a quiet night; countenance cheerful, and pulse natural. My attention was arrested by the size of the abdomen, it being larger than before her delivery. Percussion everywhere elicits loud tympanitic resonance. No special tenderness upon pressure. I was informed that the same apparent condition of the abdomen followed the delivery of the last child, and it gave considerable uneasiness to her physician in attendance at that time. It did not wholly subside for some three months. The lochia are abundant. After-pains are of moderate severity.

December 23d.—Patient had a restless night; pulse 144; distention of the abdomen is increased; resonance upon percussion clear everywhere; complains of no pain in the back or extremities, but of a general “soreness or bruised feeling.” By supporting the walls of the abdomen, these sensations are much relieved. The countenance is natural; lochia likewise, and abundant. No secretion of milk; tongue slightly coated. The temperature of surface is pleasant, and there has been no rigor or chilliness.

Directed hot fomentations, sprinkled with turpentine, to be applied to the surface of the abdomen, and terebinthinate enemata.

R.—Hydrarg. prot. chlorid., . . . gr. xij.
 Pulv. gum opii, . . . gr. iij.
 M. et ft. massa in pil. iij.

Sumat unam pilulam quoque hora tertia.

To be followed by

Ol. ricini,
 Ol. terebinth., . . . ää., ʒss. M.

2 P. M.—The patient expressed herself as being very comfortable, and free from all pain. She is quite cheerful. Skin natural; pulse 120. Enemata were administered; but little gas was expelled.

8 P. M.—General condition of the patient the same; pulse 136. Dr. McClellan was now called to visit Mrs. C., but no well-grounded

opinion as to the nature of disease could be arrived at. Directed a continuance of the same treatment.

Dec. 24, 9 A. M.—Bowels have been very freely evacuated during the night; distention of the abdomen somewhat diminished; complains of no uneasiness upon pressure; resonance upon percussion everywhere loud, and there is no evidence of effusion. Patient moves easily in bed from one side to the other, and lies comfortably on either side. Countenance good; mind clear, and very cheerful; pulse 120; tongue slightly coated; lochia natural and abundant; no secretion of milk; secretion of urine ample, and bladder evacuated without difficulty.

R.—Hydrarg. prot. chlorid.,	.	.	.	gr. xij.
Pulv. gum opii,	.	.	.	gr. vj.
Gum asafœtidæ,	.	.	.	3ss.
M. et ft. massa in pil. viij.				
Sumat unam quoque hora sexta.				

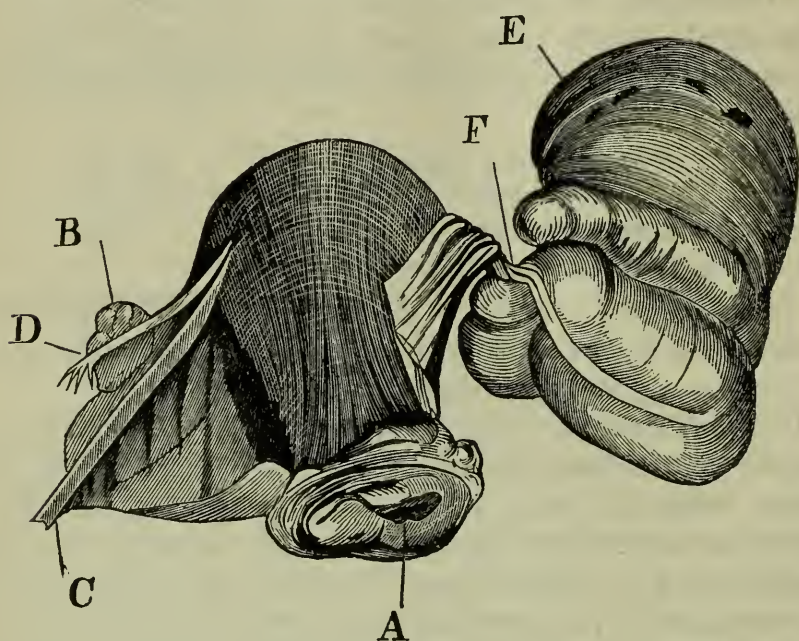
O'Beirne's tube was introduced some two and a half feet into the bowel, and a small quantity of gas escaped.

4 P. M.—Visited the patient, and found her very comfortable; she conversed very cheerfully for an hour or more. Turned easily upon the side. Pulse and other symptoms the same. This condition of things lasted until Sunday 25th, 5 P. M., when vomiting supervened. I saw her at 8 P. M., and found her in collapse. The abdomen is enormously distended. Pulse 160, and very feeble; extremities cold, skin wet and clammy; countenance pale and anxious; she continued to sink, and died on Monday 26, at five P. M., 24 hours after vomiting commenced.

A post-mortem was made by my friend Dr. Isaacs, 22 hours after death, resulting as follows:

The abdomen was enormously distended; a small puncture having been made through the anterior wall, gas freely escaped, and the size of the abdomen became diminished to about one-third. The remaining distention was produced by gas in the stomach and intestines. There were about three pints of a bloody serous fluid in the cavity of the pelvis and lower portion of the abdomen. In this fluid were several flakes of coagulable lymph. A tumor of a very dark-purple color, in fact, almost black, and about the size of the foetal head at full term, occupied the left iliac fossa, and the left lateral portion of the pelvis. It was ascertained to be formed of the left ovary, which had become diseased, and contained a number of multilocular cysts. In the interior of all these cysts was more or less of coagulated blood,

with a quantity of thin, slightly sticky or adhesive fluid. There were *several small perforations in the walls of the cysts*, through which the bloody fluid escaped into the cavity of the peritoneum. The walls of the cysts were uncommonly thick, spongy, and vascular, and contained within their substance an unusual amount of blood. The ovarian tumor was not attached to any other organ than the uterus, and to that only by a narrow pedicle or neck, about $1\frac{1}{2}$ inches in length.



A, Os Uteri. B, Right Ovary. C, Round Ligament. D, Fallopian Tube. E, Ovarian Tumor. Three small openings or lacerations are seen on its surface, from which the fluid of the cysts escaped into the cavity of the peritoneum. F, The twist in the Pedicle, connecting the Tumor to the Uterus.

This pedicle was found to have been twisted, the tumor having evidently been turned over or revolved upon itself one and a half times, so as to nearly interrupt, or at least greatly to interfere with, the circulation of the blood in the tumor, and especially with the return of its venous blood. A small portion of the abdominal wall, which was in contact with the tumor, showed increased redness and vascularity, with some small flakes of coagulable lymph on its surface; at all other points the walls and contents of the abdomen presented nothing remarkable.

I would remark, that the existence of this tumor was unknown to the patient, and consequently to her medical attendants, as her general health had been excellent. During the progress of the case, the distention was so enormous as to preclude any possibility of recogniz-

ing the same, unless its presence had been suspected and carefully sought for. From its size, it had been evidently of long duration, being quite as large, if not larger, than the diseased ovary found in Dr. Van Beuren's case, (reported in the *New York Journal of Medicine* for March, 1851,) which was of 5 years' duration. It would therefore seem that under the presidency of a single ovary, the uterus is competent to perform its complete functions, as this was the third child of which this lady had been delivered within five years. From the history of the case, it is probable that the strangulation of the tumor took place during the night preceding the labor, and was first manifested by the peculiar "agonizing pains" in the left iliac region, &c., and that the rupture of the cysts, with escape of their contents, did not occur until 24 hours prior to death, and was followed by vomiting, cold extremities, and all the usual symptoms of collapse.

Before concluding, I must acknowledge my obligation to Mr. Baylis, of this city, for the accurate drawing of this pathological specimen.

REGULAR MEETING, MAY 15TH, 1860.

DR. HORATIO S. SMITH read an interesting and able paper on *diphtheria*, detailing at length, and with great accuracy, the history and treatment of several cases, *two* of which were deemed to be completely typical of that disease. A discussion of some interest followed, and was opened by Dr. MASON, who remarked that he considered diphtheria to be a constitutional disease, affecting the blood and the nervous system, and proving fatal in some instances from its changes produced in one or both of them, rendering them unfit to perform their part in the vital economy.

In other cases death is the result of local derangement, interfering with the function of the affected organ. Dr. M. had met with several cases in which the characteristic cream-colored deposit was thrown off on the sixth or seventh day; the patients recovering after slow and prolonged convalescence.

In one case, that of an infant under two years of age, death was caused by the local effect upon the larynx, which was involved when the patient first came under observation. The prognosis was decided, and of course unfavorable, and the fatal result occurred within twenty-four hours after the first visit.

Two other cases which were described resulted in death from depression of the vital forces.

In these cases the stomach, for twenty-four or thirty hours before

death, grew irritable, and refused to retain medicines or nutriment. He regards this as a *most untoward symptom* in any stage of the disease.

In every instance in which he had observed this malady, it was marked by great rapidity and feebleness of the pulse. The kidneys were more or less involved, albuminuria being not unfrequently present.

Treatment.—Dr. M. relied upon the tonic and stimulant treatment. If the patient should be seen in the onset of the attack, he thinks benefit may be derived from small doses of the protochloride of mercury, given at intervals of three or four hours, for twenty-four hours. These should be followed, if not conjoined, with quinine, muriated tinct. iron, liquor chlorinii, U. S. P., four to six or more drops, three or four times per diem.

The chlorate of potass is an appropriate remedy internally, and as a wash for the throat, and should be given when patients entertain no special dislike to it, and no nausea follows its use. The caution implied in this remark applies with peculiar force in this complaint, to all remedies and nutriment. The importance of allaying or preventing that irritability of the stomach to which we are liable in this disease, cannot be too deeply impressed on the mind of the physician.

Besides the chlorate of potass as a local application, chlorine water diluted and sweetened, solutions of yeast, &c., are found soothing and beneficial. He thinks he has derived much benefit from the old-fashioned "*red-pepper gargle*," composed of *capsicum*, common salt, vinegar, and water. The strength should be adjusted to each case. He has used the nitrate of silver, generally, perhaps in every case. In one particularly, where a relapse followed exposure to cold, and symptoms of laryngitis were induced, *great relief* was obtained by the application (as near as possible to the vocal chords) of a solution of Zi . to the ounce.

The diet should be supporting and digestible: wine whey, beef-tea, mutton-tea, brandy and water, eggs, milk, milk punch, (if these last agree with the patient,) &c., &c., should be given; and should the stomach fail to receive and appropriate these, nutritious enemata should be faithfully used.

The regimen should comport with the general treatment; *careful* VENTILATION of the apartments should be practiced—a point, it is apprehended, too seldom regarded. All muscular and debilitating or annoying mental effort should be strictly forbidden, and cheerfulness and quiet enjoined.

DR. ENOS related a case of diphtheria, with paralysis, albuminuria, and *presbyopia*. Recovery.

M—— D——, aged 12, constitution not robust, while menstru-

ating, April 28th, 1860, for the third time, was taken with chills and sore throat. White patches soon formed on the tonsils, and after a day or two, the pharynx was also covered, and nose filled; pulse 100 to 112. Brandy, three ounces daily, and beef-tea, taken.

May 6th. The tonsils were covered for the third time, pharynx for the second; no taste, epistaxis.

16th. Weaker, wants to sleep, loathes food. Urine acid and albuminous, s. g. 1020. She was ordered to increase the brandy to half ounce every hour, and to take eight drops of the muriated tinct. of iron every four hours. No membrane on the fauces. Deglutition very difficult.

28th. Great loathing of brandy; infusion of chiretta substituted, which improved her appetite. Cannot walk. She has sensation in her limbs, but little power of motion. "Don't know where they are—they feel sleepy."

June 5th. Has partial amaurosis, with presbyopia; can read only with her mother's glasses. She has pains about her sides and joints. Urine not albuminous; pulse 112. Has great difficulty in moving her limbs, and in speaking, and in swallowing. Vision no better.

June 22d. Pulse 136; respiration 35. Had strangled almost to suffocation whilst taking a drink. The constrictor muscles of the pharynx were doubtless paralyzed, and the chink of the glottis not closed in deglutition. She was in great distress; ordered no more fluids to be swallowed, but nourished her by injecting brandy, beef-tea, &c., into the rectum every hour.

June 24th. Can swallow better; vision nearly restored. Lower limbs useless, though not entirely paralyzed.

July 1st. Sent to Newtown, L. I., where she remained until August; at which time she had gained the use of her limbs. In October she was in excellent health.

DR. ENOS thinks this paralysis is what E. Brown-Séquard calls *reflex, i. e.*, "a paralysis due to an excitation that has come to the spinal cord from a sensitive nerve;" for,

1st. The local excitation appears before the paralysis; the diphtheritic patches appeared on the tonsils, pharynx, velum, and in the nostrils, twenty days before the muscles of the velum were paralyzed, and thirty-eight days before the amaurosis with presbyopia, and partial hemiplegia, and fifty-three days before the paralysis of the constrictor muscles of the pharynx.

2d. The vision and the power of deglutition were soon restored, which would not have been the case had there been organic lesion of the nervous centres. This affection being, doubtless, a blood disease, and

attended with great debility, the nervous system, by reason of this, may yield more readily to the local excitation, than it would in the normal condition.

DR. HENRY regarded diphtheria as a constitutional disease of an asthenic character. He preferred the stimulating plan of treatment, but would not give food unless received willingly, as the assimilative power is deficient, and food would become a perturbing influence. He does not give quinine, as it acts unpleasantly upon the nervous system, and is a sedative.

DR. MITCHELL remarked that diphtheria followed the course of all meteorological diseases, the first cases being the most severe and fatal. The recent cases he had seen were milder, and required little treatment. It seems to have been carried from one family to another, yet there was little evidence of its being contagious.

DR. BURGE had recognized, among many cases of sore throat, but one in which there was the characteristic deposit. He used tonics and stimulants. His patient recovered.

DR. SMITH had seen five cases in one family and three in another. When the stomach refuses to retain food, the cases are soon fatal.

DR. SQUIBB remarked that the results of food and medicine do not seem to arrive in the blood, and suggested that the whole mucous lining of the digestive canal, in a manner similar to the throat, thus interfering with the function of assimilation.

DR. BELL had treated five severe cases; three died. In one case, a child twenty months old, debilitated by an attack of measles, the membrane had been very abundant previous to the tenth day, when there was an entire loss of relish for food, great depression, retention of urine from paralysis of the bladder, torpor of the bowels, abscesses behind the ear, boils on various parts of the body, maturing in a day or two, and death on the 17th day. Believing it to be a disease of the blood, Dr. Bell relied upon a tonic and stimulating plan of treatment, and doubted the utility of nitrate of silver and other local treatment.

The mother had her finger bitten by this child. A chill followed. The finger was swollen and hard, and the system prostrated. She was sick for five days; throat sore, but no deposit.

DR. BELL thought that local causes had much to do with the disease, and that there are many cases among the poor, reported as croup, which are diphtheria.

REGULAR MEETING, JULY 17TH, 1860.

DR. C. L. MITCHELL read a paper on "*Ergot in Spermatorrhæa, Congestion, and Irritation of the Genital Organs in the Male.*"

The first use of ergot for other than obstetric purposes seems to have been in 1840, when it was used to relieve *diarrhæa*. About one year afterwards, it was used in various hæmorrhages, more especially in hæmorrhage after labor, and menorrhagia. In 1843, it was administered in a case of chronic retention of urine in the male, it being inferred that, as it produced uterine contractions in the female, a similar effect might be expected on the muscular fibres of the bladder in the other sex. The experiment proved successful, and the patient, who for three months had been compelled to use the catheter daily, was soon cured.

My own experiments with this drug were commenced in 1845, and without the knowledge of its having been used for any other purpose than to excite uterine contraction, either before or immediately after labor, or in cases of polypi or menorrhagia.

Its efficacy in menorrhagia led me to think it operated in other ways than by exciting contraction of the uterine fibres. In cases, for example, in which the too profuse discharge was unchecked by ergot administered after the flow commenced, the desired result was obtained by commencing its administration a few days prior to the expected menstrual period. In these instances, the "turn" is usually preceded by pain in the back and in the iliac regions, and with feeling of weight or pressure in the hypogastric region; in other words, by symptoms of congestion of the uterus and ovaries. These may be so slight as scarcely to attract the attention of the patient, or they may be of great severity. They may make their appearance a few hours before menstruation, or annoy the patient for a week beforehand. Ovarian congestion occurred; the exhibition of ergot was generally followed by a relief of the symptoms.

An unmarried lady, twenty-five years of age, had for *ten years* been subject to a monthly return of extreme suffering from dysmenorrhœa. After exhausting all the professional resources which the neighborhood of her residence afforded, she came to New York for further medical assistance, and thus came under my care. The patient was tall, well formed, robust and ruddy, and presented in her whole appearance the evidences of perfect health. I was informed that the pain invariably began three days before the expected sickness, and went on increasing till the second day after the discharge had commenced. The intensity

of her sufferings was described by her married sister as worse than those of severe labor, and (although the loss of blood was slight) leaving the patient pale and exhausted. Iron, iodine, guaiac, belladonna, and many other measures, local and general, had been used, with no perceptible advantage. No preparatory treatment being necessary, I directed a vegetable and farinaceous diet, cold ablutions, and active exercise in the open air. Six days before the expected sickness, she was put upon the use of ten grains of ergot every six hours, which, after three days, was increased to ten grains every three hours, to be continued till the pain was relieved. Occasionally, a laudanum injection was administered at night, with a view to secure sleep. Under this course, the attacks became less and less severe, and the patient returned home six months after, almost well of her long-continued distressing malady.

The dysmenorrhœa in this case was not due to neuralgia, nor inflammation, nor mechanical obstruction, but to congestion of the uterus and ovaries; and by relieving the congestion, the disease was cured. This relief was obtained by the use of ergot.

As the action of ergot is chiefly directed to the *generative organs* of the female, it seemed to me a fair inference that it would produce a similar effect on the corresponding organs of the male, they being supplied with a corresponding set of nerves of like origin. I accordingly tried it in the following cases.

The first was that of a gentleman, a lawyer by profession, who applied for relief from seminal weakness. The emissions, he said, occurred chiefly at night; sometimes several nights in succession; sometimes every second or every third night. At no time were these consecutive nights passed without their appearance. Whenever they occurred, whether nightly, or at intervals of one or two nights, there were generally three emissions within six hours. They were always attended with a sense of exhaustion, a painful feeling of weariness, and extreme indisposition to make the slightest effort. For three years he had been subject to these frequent and prostrating discharges, until his gait had become feeble and infirm, his appetite was gone, his complexion pale, his eye languid and lustreless, and his expression of face so lacking in tone and energy as to suggest the idea of commencing idiocy. His professional pursuits were seriously interfered with, and almost suspended.

A carefully regulated diet, exercise, and sleep, with the use of camphor, had given but temporary alleviation, and but little if any improvement in his general health. Ergot was now resorted to, from

thirty to sixty grains being administered daily, and was followed with an immediate change for the better. The discharges diminished rapidly in quantity and frequency, the appetite improved, and the strength of mind and body perceptibly increased. In less than a month he was feeling better than he had done for a year previously. He subsequently married, and has since had but occasional returns of his complaint.

This is almost an extreme case, and the direct effect of the drug in controlling the disease and averting the threatened prostration of mind and body were too obvious to admit of question.

The second case was that of a physician, 40 years of age, practicing in the malarious districts of Ohio and Michigan. He was a gentleman of intelligence and education, and surrounded by an interesting family. His field of practice was wide, and fatigue and exposure had made him subject to a very painful form of intermittent. To enable him to continue his duties, he warded off the attacks of his disease by opiates, until he became a confirmed opium-eater. Soon after the habitual use of opium was commenced, he became subject to frequent seminal emissions, and under the combined influence of these two causes, in less than four years he became almost imbecile. His practice was abandoned, his family scattered, and he was received as a confirmed invalid in the house of a relative, then living in Brooklyn. Several efforts were made by physicians in New York and in this city to break up his habit of taking opium, and if possible restore him to health and usefulness. He was willing to submit to any course of treatment that might be deemed best, even if the attempt should be perilous to life; consenting to be locked in a room, and to take nothing but what was given by his attendant. But every attempt to reduce the quantity of opium was followed by such alarming symptoms of sinking, that it was thought best not to persist in them.

When the patient came under my care he was much emaciated, without appetite, subject to frequent evacuations of the bowels, and so weak as to be barely able to walk slowly across the room three or four times. His mind was in such a state that he could not read five minutes without inducing distressing nervous symptoms, and he was unable to write two consecutive sentences. He had been long subject to involuntary seminal emissions, a discharge occurring at every stool, and each amounting, as he supposed, to from one-third ($\frac{1}{3}$) to one-half ($\frac{1}{2}$) a drachm.

Warned by the experience of my predecessors, a diminution of the opiate was not at first advised, but efforts were mainly directed to

building up the strength. His debility seemed too great to admit of the withdrawal of any stimulus that could contribute to his support. His diet consisted of animal broths, and such articles as his enfeebled stomach could best dispose of. Ergot was given in conjunction with camphor, to remove, if possible, the exhausting seminal emissions, and we had the gratification of seeing them entirely arrested in seven days from the commencement of the treatment.*

The third case was that of a student of medicine, about thirty years of age, who applied for relief from "stricture of the urethra," as he termed it. He complained of distressing pain about the neck of the bladder, accompanied with an irresistible desire to pass water every half hour. At times he was able to refrain for an hour. At night his rest was constantly interrupted by calls for micturition, and his sleep entirely prevented by painful erections of the penis, unless allayed by morphine in considerable doses. In evacuating the bladder, the urine dribbled away by drops, or flowed in a small cork-screw-shaped stream, with sensation of scalding. From five to ten minutes were requisite to discharge from an ounce to an ounce and a half of water. The lips of the urethra were swollen, everted, and red, and gave place to a discharge of what appeared to be viscid mucus. This attack had continued five days and nights.

He had suffered from several attacks following bilious fever, while residing at the West, a few years previously. He was then in the habit of relieving the priapism and inducing sleep by the free use of morphia, and says that, although under the care of good medical advisers in St. Louis, no remedies but opiates seemed of any avail in al-

*To complete a report of this most interesting case, I will add that, at this stage of the treatment, a systematic reduction of his opiate was entered upon. Thinking that the system had not time to accommodate itself to a daily reduction, even though the reduction be but one drop from each dose, I made a diminution of ten drops at once, and continued the same dose until the patient felt that he had become accustomed to it; in other words, that the reduced quantity had all the sustaining effects of the original allowance. The dose was then reduced by ten drops more, and the reduced quantity continued till the wants of the system were met by it. Generally a change was made every seven days, but sometimes the same quantity was continued undiminished for ten or twelve days. Just in proportion as the opium was diminished, its place was supplied with increasing doses of quinine. In less than three months the morbid appetite was mastered, the mental wretchedness and bodily weakness had given place to cheerfulness and hope, and some degree of vigor and strength. Not long after I received a letter of three closely-written pages, which in no point evinced any mental deficiency, and giving assurance that opium was no longer a necessity to him.

laying his distress. The duration of the attacks usually extended to several weeks, the symptoms subsiding gradually.

Ergot and camphor were now prescribed, in doses of ten grains of ergot and three grains of camphor, repeated every three hours. In less than thirty minutes after the first dose, the distressing sensation about the neck of the bladder disappeared, and urine was passed freely, in a full stream, and without pain. After the third dose he felt himself, as he expressed it, "free from all inflammation of the mucous membrane of the urethra." He left the city, and three weeks after wrote "that he continues well, that he passes water naturally, and has received great benefit from the ergot in relieving the erections at night, and quieting the irritability of the bladder."

In this case the peculiar efficiency of ergot in relieving congestion was clearly demonstrated. Not only were the painful sensations of the patient promptly relieved, but the engorged state of the mucous lining of the urethra, the existence of which was obvious to the sight, quickly and completely removed.

For ten years past I have used no remedy for spermatorrhœa but ergot, and with marked success. Several of my medical friends also have used the same medicine, and, in most instances, so far as I have heard from them, with gratifying results. I would therefore suggest its use by the members of the Society, with a view more fully to determine its precise value as a curative agent in cases of debility, irritation, and congestion of the male genital organs.

MONTHLY SUMMARY OF AMERICAN MEDICAL JOURNALISM.

By O. C. GIBBS, M.D., Frewsburg, N. Y.

Diphtheria.—In the *Boston Medical and Surgical Journal* for January 24th, Dr. L. H. Angell has an article upon this subject. We make one quotation only. "Tonics and the preparations of chlorine are indicated to arrest the febrile paroxysm, and, consequently, the formation of false membrane. I have principally relied upon quinine and the chlorine mixture, and have not been disappointed in a single instance."

In the *Cincinnati Medical and Surgical News* for January, Dr. W. H. Matchett, of Ohio, has an article upon this subject. As Dr. Matchett's treatment differs somewhat from that we have previously

seen recommended, we shall attempt a synopsis of it. After moving the bowels, he trusts the case, so far as internal remedies are concerned, to quinine and *iodide of potassium*, both in tolerably full doses, and frequently repeated. In addition, he adds a generous diet. As local means, he recommends a gargle of pepper, salt, and vinegar. This is also applied by means of a swab, and then the parts are dusted with finely-pulverized borax; these local means are frequently repeated. A tar plaster is applied to the neck. Unlike Dr. Calhoon, of Georgia, referred to last month, he does not ascribe the cure to the tar plaster, but to the quinine, iodide of potassium, and nourishing diet. He does not approve of the frequent application of a strong solution of nitrate of silver to the diseased parts. He says: "The frequency with which the solution of nit. arg., of the strength of 20 grains to the ℥, is used by some physicians, is, *of itself, sufficient to produce serious difficulty.*"

Partial paralysis, after diphtheria, is not a very uncommon affection. In such cases, Prof. Pepper, of the University of Pennsylvania, makes the following prescription:

"R.—Extract of St. Ignatius' bean,	8 grains.
Sulphate of quinia,	30 grains.
Vallett's mass,	one drachm.—M.

To be made into 30 pills, of which one is to be given 3 times a day, after meals. At the same time electricity is to be applied to the throat."

In the *Chicago Medical Examiner*, for January, Dr. T. J. Pearce has an article upon diphtheria. He has but little confidence in topical treatment: "I think the too frequent *swabbing* has been in many cases a fruitful source of mischief." He does not object to gargles. "As an external application, when there is œdema or enlargement of the parotid or cervical glands, I have found nothing better than the free use of tinc. iodine. A domestic poultice of equal parts of *tar* and wheat bran may often prove serviceable." He, however, places greatest reliance upon general remedies: "We know of no course better than the free use of chlorate of potash, mur. tinct. ferri, and sul. quinia. The mur. tinct. ferri, I think, is generally given too sparingly." When emetics are needed, he recommends *sulphate of copper*, or, in croupal cases, *sulphate of iron*. As a gargle, he prefers the sulphate of copper in solution.

The Special Committee of the New Jersey State Medical Society, as per report in the *Medical and Surgical Reporter* for January 26th, recommend the following, which does not differ from that usually re-

lied upon: "The tinct. ferri sesquichloridi, ten to fifteen drops, in water, every three or four hours, with chlor. potassæ and quinia, and brandy with milk, chloric ether, etc., are the articles chiefly recommended." As a local application, a solution of nitrate of silver is preferred.

Before the Paris, Ill., Æsculapian Society, at a recent meeting, the subject of diphtheria was under discussion. Dr. Chambers relied upon chlorate of potash, and large doses of quinine, with the local use of nitrate of silver, "gr. 60, to the ounce of water." Dr. Tenbrook relied upon stimulants and tonics, and the solid nitrate of silver locally. Prof. N. S. Davis prefers the *tincture of iodine*, as a local application, believing it will stop the spread of the disease from the throat to contiguous parts. We quote from a report in the *Chicago Medical Examiner*, for January, the remarks of Dr. S. York: "Emetics should be used continuously; of these he prefers alum, one teaspoonful every twenty minutes until vomiting. Avoid the *too frequent application of caustics to the throat*; it produces mischievous irritation; not oftener than once every day, or every other day. When the disease has extended into the larynx and trachea, stop the local application of tincture of iodine, or nitrate of silver, (we should have observed that he prefers the tinct. of iodine.) It is then a useless annoyance. A vast majority of cases die in which there is complete aphonia known of only four recoveries from this condition. Here I give quinine very freely, with Dover's powder."

We have thus endeavored to give a *summary* of the practical portion of the papers, upon the above subject, that have come under observation in the journals for January. If any papers have been overlooked, their respective authors will please excuse us.

Hydrocele.—In the *Maryland and Virginia Medical Journal* for January, Prof. N. R. Smith has a clinical lecture upon hydrocele. In regard to treatment, he says, "I have fairly tried all the operations proposed by authoritative surgeons, and after much experience have a decided preference for the operation with the *tent*." After describing the method of making the incision, he says, "I take a small strip of soft linen, about six inches in length by one in breadth, and with the handle of the bistoury introduce it to the bottom of the scrotal cavity." This is allowed to remain there for from twenty-four to forty-eight hours.

Disease of the Heart.—In a clinical lecture by Prof. Austin Flint, published in the *N. O. Medical News and Hospital Gazette* for January, the following is mentioned as a diagnostic symptom between or-

ganic and functional disease: "Patients affected with merely functional disorder, have their attention concentrated on the heart, and are with difficulty persuaded that they have not organic disease; while patients really affected with organic disease, are disposed to attribute their symptoms to an affection of some other organ; for example, the liver, or the stomach."

We have several times observed this, and have confidently relied upon it in practice. When we see a patient greatly exercised about a supposed heart disease, we are quite confident the disease is purely functional and sympathetic. The same remark holds good in regard to consumption. When a patient is greatly exercised through fear of phthisis, so much so as to make it a daily subject of conversation, it may be safely inferred that the patient's fears are unfounded, and the disease not tubercular.

Wild Cherry-Leaf Water.—In the *Louisville Medical News* for November, Dr. Thos. E. Jenkins has an article upon the above subject. He thinks it can be made a good substitute for the "Aqua Lauro-Cerasi" of the Ed. and Dub. Pharmacopœias. From April to October first, the amount of hydrocyanic acid which the leaves contain gradually increases. The method of preparing the water is the same as that given for the preparation of the "Aqua Lauro-Cerasi." From leaves collected in September, the amount of anhydrous prussic acid obtained from distillation, is .069 per cent.; of this, the dose is from 30 drops to two teaspoonsful. Dr. Jenkins says, "The water should be collected and preserved in small black bottles, completely filled, or a drop of sulphuric acid should be added to every pint. Our experience has been that, excluded from the air and light, its properties are well preserved."

Galt's Conical Trephine.—The *American Medical Times* for January 5th contains the report of the first trial of Dr. G. A. D. Galt's new trephine. The operation of trephining was performed by Dr. Lewis A. Sayre, of the Bellevue Hospital. We subjoin his description of the instrument. "It consists of a truncated cone with spiral peripheral teeth, and oblique crown teeth; when applied, the peripheral teeth act as wedges, so long as counteracting pressure exists on the crown teeth; upon removal, however, of that pressure by the division of the cranial walls, its tendency is to act on the principle of a screw; but owing to its conical form and the spiral direction of its peripheral teeth, its action ceases. In the construction of this instrument, it is important to preserve the *precise* relative shape of the cone given in the illustration; the *size and course* of the peripheral teeth being the same.

Upon this condition alone depends the complete success of the instrument." . . . "The peculiar advantage of this trephine consists in dividing the cranial walls without any danger of wounding the membranes or the brain, whereas with the old instrument, we are in constant danger of so doing." . . . "The instrument has been recently examined "by the surgical section of the Academy of Medicine, and in all the trials, it could not be made to injure the coverings of the brain with all the force that could be used, and was highly recommended by the surgeons present."

In a more recent number of the *Times* we find that this trephine is no novelty.

Antigalactic Properties of Belladonna.—We have repeatedly referred to this subject, and given the diversified experience of others, as well as that which has uniformly attended its use in our hands. In the *American Medical Times* for Jan. 12th, Prof. A. K. Gardner has a clinical lecture upon *lactatics*, in which the following remark is made upon belladonna as an antigalactic: "From my own experience I must deduce the opinion, that while belladonna exerts no influence upon the milk already in the breast, it does in some cases, although not very apparently in all, tend to diminish or suspend further secretion. A mode of employment which I have found very effectual, is smearing the watery extract thickly over the whole breast, and repeating this application immediately after washing off the previous one, drying carefully by compression, and removing by suction or otherwise as much of the milk in the breast at the time, as possible—once or twice in the twenty-four hours; or a plaster made by a cloth or kid smeared with the extract of belladonna, and with a hole for the nipple to enter, may be placed over the breast, either partially or entirely, thus allowing the breast to be drawn, or the child nursed without further trouble."

Next to the external use of belladonna, and the internal administration of the *iodide of potassium*, he regards the internal use of *sage* and *coffee* as the most efficient antigalactics. As belladonna is not always at hand, it is well to be acquainted with all remedies that possess reputed properties for the arrest of the mammary secretion.

Pessaries, &c.—In regard to the use of pessaries in the treatment of prolapsus uteri, different opinions are entertained by physicians of equal eminence and experience. We have endeavored to give the views of those who do, as well as those who do not use and recommend the pessary.

In the *American Medical Times* for Jan. 12th, Dr. P. Stewart has

an article upon this subject, in which he takes sides against the pessary. Dr. Stewart commenced practice 20 years ago, strong in the faith of the indispensability of this means of curing uterine displacements. In the last 12 years he has abandoned the pessary, and though he has treated many cases, not one remains at present unrelieved. His treatment of prolapsus consists in the direct application of astringents by means of a soft sponge, too small to serve any purpose as a pessary, and at first rest in a horizontal position. The sponge is withdrawn, cleansed, remedicated and reapplied several times a day. In addition, the general health is attended to, and a bandage is applied to the bowels. As his bandage differs from some others, we give his description. "Perhaps I might say that I regard the bandage as a *sine qua non* in the treatment. The one I use is made in the following manner: A piece of thin sole leather from eight to ten inches long, and from three to three and a half inches wide, is taken and made to fit nicely, immediately over the pubes; another soft pad is placed over the spine, corresponding to the front one, each furnished with loops; two strips of saddler's webbing pass around the hips through these loops, one above the other and fastened in front, the lower one being a little the shortest, that the pressure may be exerted from below upward. Another strap, made with rolled cotton, passes around the inside of the head of each thigh, and fastened to the other pad by means of a small ring and an elastic. There is nothing new in this treatment, and if its results should be as satisfactory to others as they have been to myself, the use of that unpleasant instrument, the pessary, would be entirely superseded."

Placenta Prævia.—The prompt and judicious treatment of the parturient hæmorrhage that is unavoidable in cases of placenta prævia, is a matter of the first importance. In the *American Medical Times* for Jan. 19th, Prof. T. G. Thomas has a clinical lecture upon the above subject. We have only room for a synopsis of treatment in cases accompanied with copious hæmorrhage.

"1st. Os dilatable, and woman not exhausted.	{	Deliver immediately, by version or the forceps.
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2d. Os dilatable, and woman exhausted.	{	Detach a part of the placenta, and should this not be sufficient, the entire organ; apply styptics, and stimulate.
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- 3d. Os rigid, and woman not exhausted. { Detach the portion of placenta nearest cervix, and, if necessary, apply styptic and tampon, or colpeurynter.
- 4th. Os rigid, and woman exhausted. { Detach part or whole of placenta, apply sponge saturated with perchloride of iron, and support strength by stimulants."

Consumption.—In the *Pacific Medical and Surgical Journal*, Dr. James Blake has had a series of articles on the climate of California, in its relation to the treatment of consumption. We make a few quotations from the December number. Dr. Blake does not believe in the antagonism of malarious disease and phthisis. He says, "The extraordinary opinion that once prevailed, as to the antagonism between malarious disease and phthisis, is now fortunately exploded. Amongst the vast mass of medical fallacies that have been at different times advanced, it would be difficult to find one with less foundation. According to my experience, malaria is extremely prejudicial to phthisical patients. They are very liable to be affected by it, and its effects are amongst the most unfortunate complications that can interfere with the cure." How a disease that is essentially prostrating, or an influence that will, if continued, undermine the strongest constitution, should have ever been regarded as remedial in a constitutional disease like consumption, is quite unexplainable.

He has great faith in the curative influences of mountain air. "There can be no comparison between the two climates in this respect; and as phthisis is to be attacked and cured through these organs, (the lungs,) mountain climate is always to be preferred." We cannot help thinking he attributes too much influence to elevation. Elevation is secondary to temperature. A cool, bracing atmosphere is invigorating to the digestive functions, and indirectly to the whole system. We believe that degrees of latitude are of more importance than elevation.

Like all good physicians, Dr. Blake places more reliance upon air and exercise than medicinal agents in the cure of consumption. "In my previous article on the subject of phthisis, I have shown that both an improved pathology, and the result of experience derived from a vast mass of facts, point to the open-air plan of treating the disease as that most likely to cure our patients. So strong is my faith, derived from my own experience, in its efficacy for curing the

disease, that I believe fully 75 per cent. of cases taken in hand in the second stage of the disease, cannot only be temporarily relieved, but permanently cured, by a rationally conducted open-air plan of treatment, and that at least 50 per cent. of the cases that have advanced to the third stage of the disease, or in which cavities have already begun to form, can be cured, and in nearly all of them can life be prolonged by the same treatment."

Our readers will remember that we have advocated a cool, instead of a tropical climate, for the consumptive; and out-door, and even laborious exercise, we believe preferable to cod-liver oil, hypophosphites, or any other medicinal agent.

Pathology of Spasmodic Diseases.—In the *Chicago Medical Journal*, for January, Prof. Daniel Brainard has an article on the tendency to vacuum in the cerebro-spinal cavity, which exists in certain spasmodic diseases. Without touching the argument, we quote a passage or two illustrative of his conclusions. "The tendency to vacuum, as a cause or an accompaniment of convulsive diseases, has never, as far as I am aware, been suspected, notwithstanding that facts pointing directly to it have not unfrequently been observed. The first disease in which it has been shown to exist (without being suspected) is tetanus of new-born infants." . . . "There is strong reason to believe that trismus of new-born infants does not differ in cause or character, in general, from traumatic tetanus." . . . "In this disease, in hydrophobia, in certain forms of insanity, in spasmodic cholera and delirium tremens, whenever *prolonged vigilance exists*, there *must* be not only a want of *normal pressure* on the brain, but a peculiar action is exerted by which the physiological pressure which causes sleep, and that which gives rise to the coma from opium, are absolutely prevented."

The indications for treatment in these diseases Prof. Brainard reserves for another paper; yet he hints that *stimulants* will be found most successful.

Constipation.—In the *Chicago Medical Journal* for January, Dr. J. C. Batdorf has an article upon constipation. There is a class of cases that he regards as the "result of excessive absorption of intestinal liquids, and a want of normal activity in the secretions of the mucous follicles of the bowels." Dr. Batdorf reports an illustrative case: "A child seven and a half months old was troubled with constiveness. Under seven months of treatment, in which cathartics played an important part, the child, at near fifteen months of age,

weighed only *six pounds*—three pounds less than at birth. The following was advised:

R.—Ext. sarsæ.,	Öjss.	
Aquæ ferventis, . . .	3ij.	
Syrup. ipecac., . . .	3ij.	
Hydrarg. bi-chlor., . .	grs. iij.	
Syrup. simp., . . .	3ij.	Mix."

Dose, a tea-spoonful, to be taken three times daily. The bowels were to be kept open with castor oil, until the prescription should produce an effect. At the end of two weeks the oil was omitted, and at the end of two weeks more the dose of the mixture was reduced one-half. At the expiration of another week, the dose was reduced to one-fourth the original dose; at the end of two weeks more it was discontinued. At this period the bowels were rather too loose. At this time the child had so gained as to weigh eighteen pounds. In the future of the case, the bowels retained their regularity, and the patient rapidly gained the health and strength of ordinary children of its age.

Inversion of the Uterus.—The case of Dr. A. Fisher *vs.* H. O. Stone, tried at Chicago, has caused a thorough sifting of this subject. On a previous occasion, we have referred to some opinions of Prof. Delamater. In the *Chicago Medical Examiner* for January, the opinions of Prof. N. S. Davis upon the causes of inversion of the uterus are given. We quote one remark upon the influence of traction upon the cord in producing inversion. "As the womb ordinarily contracts in natural labor, it is found that a force sufficient to tear the cord off will not invert it. I have sometimes made pretty firm traction on the cord, when the womb was contracting well, and seemed in good condition. I have had some cases where the after-birth was pretty strongly adherent, and rather than introduce my hand into the womb, and finding that the walls were firm, I have made as strong traction as I could without tearing it, and then carried the hand into the womb, and pulled it off with the fingers. I believe the womb, to be susceptible of inversion by traction on the cord, must be in a state of entire atony in the lower half of it, or probably the whole of it; but if it should happen that the fundus alone was contracted, at the same time that the lower part was inactive, then the pulling and the contraction would coincide to start the inversion. I can conceive of sufficient force being applied in that way with the womb in an entirely passive condition to invert it, but not when it is in an actively contracted condition."

The Rationale of the Action of Mercurials.—The *Dental Cosmos*—by-the-way, a most ably conducted journal, as well as a beautiful specimen of typographic art—has in the number for January an able article upon the above subject, by Dr. J. C. K. Crooks. He says: “With the intelligent practitioner, some form of mercury has come to be considered the sheet-anchor in acute inflammations, particularly of serous and fibrous tissues. Popular prejudice *will not do* with the man who has the well-being of his patient at heart, and properly appreciates the value of this great *anti-phlogistic* remedy. When this ‘trembling house of clay’ is invaded by such a grave disease as an acute inflammation of one of the vital organs, blood-letting, antimony, opium, etc., may come in for their share of the triumph; but the king who can *rule* the conflict, meet the indication *best*, is mercury. This experience has taught us to be the case. Intelligently administered—given at the proper time and under proper circumstances—aided when aid is necessary, it never disappoints.”

After giving the pathology of inflammation, and describing the power of remedies over it in general, and of mercury in particular, he adds: “If mercury is able to do this, how can we account for its action, save to point at what it *invariably accomplishes*, when it is able to accomplish anything—namely, to RESTORE CAPILLARY POWER? Such, undoubtedly, is the specific action of mercurials; and, keeping this principle in view, there will be a wonderful clearing up of many of the apparent inconsistencies, incongruities, and mysteries of their operation. Their ‘alterative’ effect in chronic inflammation is immediately revealed. They correct the unhealthy state of the capillaries, by causing them to contract upon their contents.”

REVIEWS AND BIBLIOGRAPHY.

Proceedings and Debates of the Fourth National Quarantine and Sanitary Convention, held in the City of Boston, June 14, 15, and 16, 1860. Reported for the City Council of Boston. Boston: G. C. Rand & Avery. 1860. 8vo. Pp. 288.

This thin octavo, when compared with its portly predecessor, shows the effects of diminished supplies of scientific food, for which the active members of the Convention must be held responsible. The Quarantine Convention has done some good work thus far, and we hope that its future will be prolific in the same kind of effectiveness. Still,

there is something about this *thin* volume which causes us to fear lest the same want of interest, which has reduced the general usefulness of the Medical and Scientific Associations, may affect this heretofore sprightly offshoot of the two—this assemblage of the medical profession and political economists and hygeists—and curtail the extent of their labors.

The publication of the debates on the different questions before the Convention is a somewhat novel, and, to a certain extent, useful feature in this volume; but we think judicious pruning of these debates, although it would have thinned the volume, would have done no harm. We are all aware that the members of our most respectable Conventions are too prone to imitate the conduct of the members of that most unrespectable body, 'yclept Congress, and frequently speak for the sake of speaking. Such efforts should never be allowed a permanent place in the proceedings of a scientific body. While they may serve to while away a tedious hour in their perusal, they excite a general distrust in the more serious portions of the proceedings. The temptation to talk before Conventions, with those who have faculty in putting together well-rounded sentences, is too great to be overcome, especially when it is known that the ready reporter is present taking notes, and that these will be assigned a place among grave productions of learned men, thus receiving a respectable status which they could never obtain if published separately. It is right that reports, resolutions, and monographs, submitted to all our public bodies, should be thoroughly discussed by their members, before any action is had with reference to them, and before they are printed. In this way, much nonsense would be suppressed which might otherwise be printed; and as these discussions contain nonsense also, their publication should only be made when they involve some real scientific argumentation.

By way of showing the waste of space in the present volume, we have only to state the number of pages devoted to the different subjects: 101 pages to "the Proceedings"—abounding in reports of speeches, whose only value exists in the fact that they consume so many pages; 16 pages to the "Speeches at the Collation at Deer Island;" 34 pages to the "Banquet at the Revere House;" and 125 pages to the Reports and other material of permanent scientific value. Now, we must enter a quiet protest against this division of matter, which puts that of permanent value in the corner, and causes the more ornamental to occupy the most of the volume. It is very pleasant to eat a good dinner, and not at all in opposition to our sentiments to aid in drinking the health of those who deserve it, in a

glass of generous wine; and above all, in perfect accordance with our recognition of the doctrine that "one may laugh and grow fat," are we gratified with a good dinner-speech. But all this isn't science. It should die as speedily as the process of digestion is completed.

The Report on Quarantine Regulations is of very great interest. It discusses "the defects that relate to the sick and to sanitary protection," and "the deficiencies that relate to commercial transactions and public convenience," in the present quarantine regulations. The code of marine hygiene recommended seems to us in perfect conformity with our knowledge of contagious disease and its probable origin. It is prefaced by certain declarations of principles, on which the regulations of quarantine, sanitary measures, &c., are based. They state that the only diseases at present known which have required quarantine laws are plague, yellow fever, cholera, small-pox, and typhus fever. The first is left entirely to the judgment pronounced by the European Congress at Paris. We excerpt several of these "Declarations," as being calculated to show the enlightened spirit in which the whole report has been drawn up.

3. "All quarantine regulations, of any place whatever, should bear with equal force against the toleration or propagation of disease as against its introduction; and authority to prevent the introduction of disease in any place should be equally applicable against its exportation."

4. "All quarantinable diseases are chiefly introduced and propagated by the *matériel* of commerce; and it is therefore against it that quarantine restrictions should be instituted, and *not* against the *personnel*; excepting, however, persons with no evidence of vaccination, and known to have been exposed to small-pox; such persons shall be vaccinated as soon as possible, and detained until the vaccinia shall have taken effect; otherwise, they may be detained fourteen days from the time of the known exposure."

7. "The plague, yellow fever, and cholera being the only maladies that entail general measures, and place in quarantine those places whence they proceed, the restrictions enforced against these diseases shall not apply to any other suspected or diseased vessel."

The sanitary measures, on arrival from a place where either of the three diseases mentioned prevail, require that the sick on board of an infected vessel should be moved to clean, airy rooms on shore, or to a floating hospital; and it is properly stated, that "the detention of such persons in an infected ship is obviously most objectionable, and should be allowed under no circumstances whatever." The fears that

pestilential disease can be admitted by "ordinary cargoes of dry and imperishable goods" are pronounced *groundless*. "The application of sanitary measures to merchandise shall be arranged in three classes: 1. Merchandise to be submitted to an obligatory quarantine and to purification; 2. Merchandise subject to an optional quarantine; 3. Merchandise exempt from quarantine. The first class comprises clothing, bedding, personal baggage and dunnage, rags, paper, paper-rags, hides, skins, feathers, hair, and all other remains of animals, woollens, and silks. The second class comprehends cotton, linen, hemp, and *cattle*. The third class comprehends all merchandise not enumerated in the other two classes." The following hygienic measures may be ordered by the sanitary authority, as regards the vessel: "Baths and other bodily care for the *personnel*; washing or disinfecting means for clothing; displacement of merchandise on board, or a complete breaking out; subjection to high steam, incineration, or submersion at a distance in the sea of the infected articles; the destruction of tainted or spoiled food or beverages; the complete ejection of water; thorough cleansing of the hold, and the disinfection of the *well*; in short, the complete airing and ventilation of the vessel in all her parts, by the use of force-pumps, steam, fumigation, washing, rubbing, or scraping; and finally, sending to an isolated anchorage-ground."

The Report on Registration, prepared by the experienced pen of Dr. Edwin M. Snow, of Providence, R. I., gives the defects of the present laws in such of the States as have attended to this important measure, and suggests the form of an ordinance as to the registration of births, marriages, and deaths, intended to be employed wherever an incorporated city has had the power conferred upon it by the State to make laws on this subject. The close attention Dr. Snow has given this subject for some years must give his report special value to our municipal and State authorities.

The Utility and Application of Heat as a Disinfectant, by Dr. Elisha Harris, of New York, is well worth perusal. We have long since looked upon the process of refrigeration as impracticable, as a means of disinfection. The difficulty of producing artificially a low degree of temperature, by any known refrigerant mixtures, so as to affect the whole extent of a vessel or infected building, is too great, and the expense implied by the experiment too large, to induce the hope of even a trial, except where the government treasury is at the disposal of the experimenters. Besides, on any theory as to the nature of *fomites*, we are not prepared to see how the theory can be supported on a scientific basis that such fomites will be destroyed at a low tem-

perature. The difficulty is the same, whether fomites be considered of inorganic or organic nature; whether cryptogamic or animalcular. Experiments, however, have shown that a heat of 212° has destroyed *apparently* the contagious matter, be it what it may, of scarlatina, typhus, &c.; then certainly, as the application is conveniently and cheaply made, heat should be at least included in the list of such disinfectant agents as must be employed in cases of infection. Two paragraphs from Dr. Harris' report present the results of observation thus far on this subject, and the conclusions which we must derive from the same, in such a clear manner, that we transcribe them for our readers.

"If it can be demonstrated that a temporary application of heat, either by steam directly applied, or by heated air, at any temperature not higher than 212° F., will certainly and effectually disinfect all varieties of pestilent and febrile *fomites* and contaminated apartments, then it may be safely asserted that the time is near when such *fomites* and the apartments of infected vessels, hospitals, and infectious fever-chambers, or pestilential *foci* and *fomites* of every class, will be systematically and effectually disinfected by some ready method of applying such degrees of heat as may be required."

"It is not to be supposed or desired that heat will be a substitute for thorough ventilation, cleanliness, and hygienic regimen; but that its application will be resorted to when and where these essential measures of hygiene are insufficient for the removal of localized febrile infection. The localized infectious cause of yellow fever in material substances, in domiciles, or in ships; the inhering poison of puerperal, typhus, and other specific infections in hospital wards and close sick-rooms, and the immediate and safe disinfection of pestilent *fomites* of every class, require such an easily applied, controllable, and permeating agency as an elevated temperature for their purification."

Lieut. Egbert L. Viele's "Report on Civic Cleanliness and the Economical Disposition of the Refuse of Cities" is entitled to careful consideration of our municipal authorities, on account of its practical character. It abounds in suggestions arising from a careful consideration of the whole subject. Let us have cleanliness by all means, and if we can make the ejecta prove of practical value, either directly or indirectly, all necessary information on the subject should be imparted throughout the length and breadth of the land. The price of health, as well as that of liberty, is *eternal vigilance*.

Dr. C. B. Guthrie, of Tennessee, or New York, (we can't tell which, as he seems to belong to both States,) presents a Report on Restrict-

ing the Sale of Poisons. This is a much-vexed question. The idea that *all* restricting laws are interferences with the liberty of the subject, is so prevalent in our land, that it is exceedingly difficult to make our legislators understand the full extent of their duty to the public. We hope State Legislatures will take hold of this subject, and impose heavy restrictions on those who have heretofore been disposing of deadly drugs, without question or restriction, to all purchasers who may be disposed to apply for them.

In conclusion, and by way of somewhat modifying what we have said in the opening portion of this review as to the small quantity of scientific material in the volume, we may say that the reports contained in this account of the last meeting of the Quarantine Association entitle it to a place among the real contributions to hygienic science. Let its successors contain only the scientific material which has been presented, omitting the buncombe and the spread-eagle speeches.

L. H. S.

Transactions of the American Medical Association for 1860. Second Notice.

The Section on Practical Medicine and Obstetrics, which one might be innocent enough to suppose would present a series of valuable papers, offers as its contribution but one, of which the subject is "The Influence of Alcoholic Drinks on the Development and Progress of Pulmonary Tuberculosis," by N. S. Davis, M.D., of Illinois. The record of the proceedings of the Section shows that one other paper was read before it, and referred back to the author. Some discussion of obstetrical subjects is noted, but no report of them is preserved.

We do not know that it would be possible to make Dr. Davis look with complacency upon any use of alcoholic drinks. From his papers, including with this some upon kindred topics, we judge that he is an uncompromising teetotaler; a man very good in his way, but not on that account the most fit person to judge of the effects of alcoholic drinks. Be that as it may, Dr. D. says, that within eight years "the idea was announced and rapidly circulated," that Bourbon whiskey and lager bier would prevent or retard the development of pulmonary tuberculosis. Immediately, he commenced a record of all his well-marked cases of tuberculosis, and this is the result of 210 such cases. Of these, 68 had used alcoholic drinks almost daily; 91 had used them occasionally; 51 had wholly abstained. Of the daily drinkers, only

15 "were such as are usually called drunkards," and 5 of these had delirium tremens when admitted to the hospital.

From these premises the author argues, that these drinks do not prevent or retard the development of tubercle, for these, in fact, are the premises, though drawn out by brief reports of several cases. But the conclusion is not logical. No one has asserted that a person who drinks alcoholic beverages will not have consumption. If such a statement *had* been made, these cases, or rather three-fourths of them, would prove it false. We do not remember to have seen or heard "the idea announced," which was the cause of the statistical record of our author; but in order to meet such a statement, observation must be made on a more extended scale. Thus, it doubtless is true that a good portion of the population of Chicago, especially of the class of poorer foreigners, from whom most of Dr. Davis' patients were drawn, drink wine, beer, or the stronger spirits, either occasionally or habitually. Now, does phthisis pulmonalis prevail among them more than among the teetotalers? Do those who are of tuberculous families develop this disease more certainly or more rapidly if they use these beverages than if they totally abstain? We do not intend to be understood to answer these inquiries in the one way or the other, but to show how the author of this paper wanders from the logical answer to the inquiry which is his text.

In fact, Dr. Davis' argument might be turned against his own position, as in this way: Of the adult population of Chicago, it is a large allowance, that *one-tenth never* drink alcoholic drinks, including wines and beer. We find in the record, that of the 210 cases, 51 were teetotalers; that is, nearly one-quarter of the patients were from a class which would be fully represented by one-tenth, 21 instead of 51.

No doubt the records were made and the paper prepared with the best of intentions, but it is our duty to point out the fact that it is illogical, and being so, it fails of its intended purpose as an argument.

May we go so far out of our way as to say that this want of logic has been the cause of many of the errors made by the leaders of the total abstinence movement? Utopian ideas of what should be and can be done, have repeatedly led them to enact laws, such as that known as the Maine law, which have been inevitably followed by a reaction, and intemperance thus been increased, not diminished. But it is always thus with enthusiasts, and we must endure this infirmity of our nature.

Leaving Dr. Davis' report, we find it is succeeded by a "Report on the Education of Imbecile and Idiotic Children," by H. P. Ayres,

M.D., Fort Wayne, Indiana, occupying 138 pages, and presenting a very good summary of the opinions of authors upon the treatment of idiocy and cretinism. It is not marked by anything particularly interesting to those familiar with these subjects; and although a useful paper, does not call for an extended notice. We wish good luck to all who undertake the improvement of these unfortunates.

The report on Inebriate Asylums, by C. McDermont, M.D., of Dayton, Ohio, follows next, and is of the same character with its predecessor; that is, it is a synopsis of the opinions of those who have written on the subject. On this subject, however, opinions are mainly theoretical, and while we hope for great results from the New York Asylum, we await the experiment with some fear. Our readers are familiar with the doctrines of the paper.

There remains the report on Medical Literature, and that on American Medical Necrology; of the latter it is only necessary to say, that it is from the pen of Dr. C. C. Cox, and therefore is well done, and that it embalms the memory of many who, having done their work, are now at rest. Of the former we must say something more.

Medical literature has before this been the subject of reports, but we like this one better than its predecessors. Marked by no partisanship, it does not strive to raise the productions of our own authors beyond their proper rank, nor does it condemn them because differing from European publications. Its catholic spirit is well illustrated by the following extract, which deserves a careful perusal:

“All medical literature, indeed all didactic literature of whatever kind, we might even add all teachings, whether literary or oral, may be divided into two great classes: the first of which comprises all those works in which new knowledge is revealed, new territory is added to the domains of established truth, whose confines are enlarged by conquests in regions of research hitherto unexplored; the second class consists of those in which the truths already known are reduced to system, or to recur to our former figure, in which the territory previously acquired or organized, each part being reduced to its proper subordination and relations to the whole; there are books in which the practical application of principles and facts previously announced is provided for by rules and specifications derived from the experience of those who have learned their necessary modifications and precise definitions by practical experiment; in such works also the history of previous discoveries in the same department of science is recounted, and the question considered how far the new must modify and be modified by the old.”

The report then goes on to say, that the great body of American works belongs to this second class, but that there is no occasion for any one to feel humiliated by this fact, or to deny its truth because there are some exceptions. The defect is not in the American mind, but in the want of demand for such labors here. Our teachers are occupied in preparing young men for graduation, not in leading educated men forward into the unknown territories of theory and experiment.

Of our periodical literature the report speaks kindly and appreciatively, and the author, Dr. D. F. Wright, of Tennessee, is apparently familiar with it. His concluding sentence we repeat. "If any expression of opinion on the part of this Society can be supposed likely to alter the existing state of things, we are persuaded that it would be best directed to the purpose of enforcing upon the profession the duty of sustaining periodicals by regularly subscribing for and paying for them."

A Practical Treatise on the Ætiology, Pathology, and Treatment of the Congenital Malformations of the Rectum and Anus. By WILLIAM BODENHAMER, M.D. New York: S. S. & W. Wood. 1860.

"No complete, systematic, or practical work on the congenital malformations of the rectum and anus has ever been published in this or any other country." So says the author in the preface to the work the claims of which upon the profession we are about to analyze. The task he assigned to himself was to supply the deficiency and present a complete work. In order to do this, he has ransacked all sources for information, and has collected in this volume nearly three hundred cases of congenital malformations of this portion of the body, of various kinds and of every variety; has classified them according to a determined plan, or a natural order, and has either given the report of these cases in full, or such a synopsis of them as would suffice to present to the reader the character and extent of the malformation. The sources from which the cases have been taken are acknowledged both in the text, and in an introductory chapter on the bibliography of the subject; the reporter's name furnishing the alphabetical order. The researches of the author have extended over several centuries, for we find reference to a volume published as early as 1503, and to a case as late as 1858, nearly all the cases having been collected by the author from the original work or journal in which they first appeared.

Although the deformity, made the special subject of this volume, is

very infrequent—Mr. Collins, of Dublin, having met with it but once in 16,645 born in the Dublin Lying-in Hospital, and Dr. Lohrer, of Vienna, but twice among 50,000 births—the author has by no means exhausted the reported cases in his work. We recall one extremely interesting case, reported by Dr. C. T. Meier to this journal for June of 1859, not found among the author's collected cases. The intestine in this case was ascertained by an operation to be at a distance of three inches from the perineal wound, was drawn down and arrested by sutures to the wound in the perineum, thus establishing an artificial anus *in situ naturali*. The child lived four days after the operation. Other cases have occurred in this city where an operation has been performed, resulting in the permanent establishment of an artificial anus at the perineum. None of these cases appear in this volume, but are certainly deserving a place in the list.

The author describes nine species of malformation. 1. Preternatural narrowing of the anal orifice; 2. Occlusion by a more or less thick membrane; 3. Partial or complete absence, with the rectum terminating in a *cul-de-sac*, at a greater or less distance from the perineum; 4. Abnormal anus, the rectum partially or entirely absent; 5. Anus absent or existing in a rudimentary state, the rectum terminating preternaturally at some point in the perineum or its neighborhood; 6. Rectum terminating in the bladder, urethra, vagina, uterus, or in a cloaca in the perineum, with the urethra and vagina; 7. Preternatural termination of other organs in the rectum; 8. Entire absence of the rectum, or complete obliteration of its whole cavity; 9. Absence of rectum and colon.

Each species is separately described, and the treatment proposed by different operators for remedying the defect, and then follows the record of cases under the specified species. Under the sixth class, 85 cases are reported; and next in frequency come the third and fourth species, being, respectively, 53 and 45 in number. Of the 287 cases whose histories are given, 156 were operated upon; resulting in 87 recoveries and 69 deaths; 42 were not operated upon; 12 recovering; 11 of these being of the sixth species, and one of the fifth; 30 dying.

The closing chapter gives a history of the abdominal artificial anus as instituted by Lettré, modified and performed by Pillore, Callisen and Amussat, with illustrative cases, and also gives the method proposed by M. Martin, of Paris, that of opening the sigmoid flexure of the colon, and exploring through the opening, by means of a trocar or sound, the rectum, and either attempt to push the instrument

through the perineum from above, or cut to it from below, the exploring instrument being the guide to direct the surgeon's knife.

The volume is handsomely illustrated with sixteen fine lithographic plates, and is printed in good clean type, on excellent paper. Altogether the book is a valuable one, not so much on account of the amount of original suggestions it contains, the subject precluding that, but from the fact that it presents the most complete record of all that is known upon the subject, in a condensed form, at the command of any one who may have an interest in it, or who may be so unfortunate as to meet with a case similar to any therein recorded.

TRANSLATED FROM THE FRENCH EXPRESSLY FOR THE MONTHLY.

Lectures on Diphtheria. (Egyptian Disease.) Delivered at L'Hôtel Dieu, Paris. By M. TROUSSEAU.

(Translated by the Editor from La Clinique Médicale de L'Hôtel Dieu, of M. Trousseau.)

GENTLEMEN—For several years the reports sent to the Academy of Medicine, the communications addressed to various scientific journals, have indicated that fatal epidemics of diphtheria prevailed in different parts of France, invading all departments; those of the south, as well as those of the north, of the west, and of the east. These epidemics also prevail abroad, in England, where for sixty years it has hardly been known; in America, in Germany, and in the Spanish Peninsula. The attention of the public, as well as of physicians, is more than ever aroused in relation to this dreadful calamity. The cases which have lately increased in my service afford me the opportunity of giving you my ideas upon this important subject, and it is my duty to communicate them to you. I shall, then, in a series of lectures, consider this disease, one of the most serious which afflict humanity. I do not intend to exhaust the subject, promising some day to write a treatise upon diphtheria. I shall, therefore, take up only the most practical points, illustrating them, as far as possible, by the patients we shall see together. Do not expect, gentlemen, a *résumé* of the numerous observations which have been made under your eyes. In making use of them, in sustaining my propositions by the experience of my *confrères*, and that of different authors, who have written upon the subject, I shall be chary of long histories, citing only what is necessary to make everything I say clear and comprehensible to you. I shall also insist, gentlemen, upon the necessity of a treatment the utility of which is to-day questioned. I shall oppose that deplorable tendency among observers of the highest order to leave the true road, which has been persevered in up to this time.

Diphtheria is a specific disease, *par excellence*, contagious in its nature, displaying itself upon the mucous membranes and the skin, and

presenting the same characteristics in both places. I say, that it shows itself upon the skin and mucous membranes, because, in fact, diphtheria has this in common with certain specific and contagious diseases, as eruptive fevers, syphilis; with this difference, however, that it affects the external teguments only when it is denuded of its epidermis. Still, the disease which we are about to study shows a marked preference for the pharynx, for the air-passages, the larynx especially, constituting the affections commonly known under the denominations of *malignant, false membranous angina*, otherwise designated *gangrenous sore throat, suffocating angina*, and now more particularly called *croup*, when the angina seizes upon the larynx. Diphtheria is frequently observed to attack the nasal mucous membrane, the buccal mucous membrane, the vagina, the prepuce, the glans penis. Of all the different forms, whether pharyngeal, laryngeal, nasal, buccal, vaginal, anal, or cutaneous, the first is by far the most common. In certain epidemics, it is this form it almost exclusively assumes, destroying those affected, by its extension to the larynx and trachea, by croup, in a very different manner from malignant diphtheria, which kills by a kind of general poisoning like septic and pestilential diseases. To this first form the attention has always been more particularly drawn, because it is the most common; it is this which has been described by the older writers, and which served as a type for the treatise on diphtheria by M. Bretonneau; it is with this that we shall commence the study we are about to undertake.

Diphtheritic Angina and Croup. (Pharyngeal and Laryngeal Diphtheria.)

Is observed in all Climates and all Seasons—Principally attacks Infants—Its Mode of Propagation—Ganglionic Engorgements—The Color and the Odor of the False Membranes Resemble that of Gangrene—Its Propagation to the Larynx—Croup—Intermittence of the Symptoms—It is generally Fatal if the Progress of the Affection is not arrested.

A young boy, four years old, in excellent health, was suddenly taken with symptoms in the throat, which at first were so slight that they did not alarm his family. After a day or two, it was noticed that he grew pale; that he was quieter than usual, and remained indifferent to his ordinary playthings. He coughed a little, but had no fever, and although his appetite was not as good as usual, he still sat up all day. Accident alone revealed the disease with which he was attacked. The family physician, who had been called to see another infant affected with epileptiform vertigo, was casually consulted for the boy. He was struck with the pallor of the skin, and perceived a slight swelling in the submaxillary region. Thus, having ascertained the existence of tumefied ganglions, he examined the throat, and found the pharynx and the tonsils quite red, while the latter were increased in size, and one of them, the right, was covered with a quite thick grayish membrane. He immediately decided that the case was one of diphtheritic angina, and acting upon this belief, he instantly cauterized the diseased part with the caustic nitrate of silver, taking care to detach the false mem-

brane by means of the nitrate. The cauterization was repeated the same evening, and the next day both morning and evening, and in the interval between the cauterizations he made, or had made, several insufflations of the powder of alum. The child was well fed, according to the express instructions of the physician, and took, besides, a tonic mixture, the base of which was the wine of cinchona. The disease was arrested, but the general pallor continued for some time, and a paralysis of the veil of the palate succeeded. The child was taken into the country, returning at the end of six weeks in perfect health.

This, gentlemen, is an example of pharyngeal diphtheritic angina; of ordinary pharyngeal angina. The insidious manner in which the disease began, the mildness of the general symptoms, the absence of fever at the time the physician ascertained the condition of the patient, the soberness of the child, the pallor of the skin, the tumefaction of the submaxillary ganglions, and finally, the presence upon the right tonsil of the characteristic false membrane, abundantly sustain the diagnosis. The paralysis of the veil of the palate, which occurred a few days after, also confirms it, and I have no doubt the energetic treatment adopted in the early stages cut short the disease, which might have extended by degrees, and having invaded the larynx, would have produced croup.

Pharyngeal diphtheritic angina is observed at all seasons, in all climates. It is not without a certain degree of astonishment that I somewhere read that this disease was seen more especially in northern countries, in cold and moist climates, and that it was almost unknown in the South of France and Italy. Whoever advanced this singular assertion,* must have had a very slight knowledge of the history of medicine, not to know that the disease described by Aretæus, and which was none other than a pseudo-membranous angina, was endemic in Egypt and Syria, whence the name of *Egyptian Ulcer* and *Syrian Ulcer*, which was given to it at an epoch contemporaneous with Homer rather than Hippocrates, according to M. Bretonneau, or not to know that Carnevale, Nola and Sgambati have given to us histories of epidemics of the *morbus strangulatorius* which reigned in Italy at the commencement of the 17th century; while Villareal, Fontecha, Nuñez, Herera de Heredia, Mercatus, and Tamajo observed it at the same time in Spain. At this time we see that these same sore throats prevail throughout all France, as I have already said. It would seem that in the same latitude pharyngo-tracheal diphtheria becomes developed at the time that catarrhal affections are most common.

Diphtheria spares no age; still, it principally attacks young subjects, and ordinarily those between the ages of three to five and six years.

It commences by a greater or less redness of the pharynx, by a swelling of the tonsils, most usually of one only; upon this is soon

* In opposition to this proposition, we recollect that an author of the last century, Wedel, has said, that diphtheritic angina, which he called *angina infantilis contagiosa*, was more frequent in Italy than in the North of Europe. "*In Italia frequentior quam apud Boreales magis Europæos.*"—*De Morb. Infant.*, cap. 20, page 77.

seen to appear a very sharply circumscribed whitish spot, at first formed by a layer resembling coagulated, semi-transparent mucus, which becomes thicker, and very rapidly takes on a membraniform consistence. This exudation, when first formed, is easily detached from the mucous membrane, to which it adheres only by very fine filaments, which penetrate the muciparous follicles.

The mucous membrane underneath is perfectly healthy, with the exception of the destruction of the epithelium; and if sometimes it appears furrowed, it is, because around the exudation it is swollen, and forms, by this means, a kind of depression. Ulceration is the exception. Generally, I repeat, the mucous membrane is healthy, or at least presents no alteration beyond an increase of vascularity, for upon detaching the false membrane with care, it can be removed without being followed by the least sign of blood. By means of the microscope, the epithelium of the mucous membrane, with its vibrating cilia, may often be seen upon its adhering surface.

After a few hours the pseudo-membrane, convex at its centre, thin at its edges, has increased; it now covers almost the whole tonsil, is adherent at the points where it first appeared, and has taken on a yellowish-white color. This color may vary from a yellowish-white to a deep yellow, to a gray, or even to a black. Then the veil of the palate usually commences to be inflamed, the uvula swells, and after a few hours more, or a day, the side of the uvula corresponding to the tonsil which is covered with a false membrane becomes covered with an exudation of the same color. Frequently, within the space of twenty-four or thirty-six hours, the entire uvula is enveloped like the finger of a glove. At the same time, a spot of the same nature appears upon the other tonsil, which is soon entirely covered by it. The bottom of the pharynx beginning to be lined upon both sides, long, narrow, longitudinal streaks of a deep-red are sometimes seen, in the midst of which are formed lines of concrete matters; sometimes membranous patches, which finally unite with each other. At this time, if the child be docile, and can be easily examined, by pressing down the tongue, the uvula, both pillars of the veil of the palate, both tonsils, and the bottom of the pharynx will be found completely covered with the coating I have just described. Portions of these false membranes can be detached by means of a pair of forceps; we have removed some in this manner, which, having enveloped the uvula, had the form of a sewing thimble.

Generally, from the commencement, the lymphatic ganglions at the angle of the jaw, those necessarily which correspond to the tonsil first attacked, are engorged. This, gentlemen, is an almost invariable symptom, which is not absent once in ten times. Its importance is then considerable, so much the more for the reason, that in ordinary angina, a disease usually of no seriousness, but which might be confounded with the disease of which we are speaking, this ganglionic engorgement is generally absent; or if it be present, it is in a much less degree than in pharyngeal diphtheria.

On the invasion of the disease, the fever is high, but it diminishes after the second day, and entirely subsides the following day, or the day after; the patient feels only a slight *malaise*, evidenced by a desire to

be at rest; a sense of feebleness; and as the only thing complained of is a difficulty often very slight, in deglutition, the beginning of the disease is not usually alarming.

Left to itself, it remains for three, four, five, or six days limited to the pharynx; the older the person, the longer the period of development, the longer it takes for the disease to invade progressively the parts within sight. If it be the fact, that false membranes form more rapidly in infants than in the adult, it is, perhaps, because the blood of the former is richer in plastic materials than the latter. It is always the case that in children of three, four, five, and six years, the two tonsils and the posterior part of the pharynx can be covered with diphtheritic concretions within thirty-six to forty-eight hours; in the adult, and particularly in old persons, five, six, seven, and eight days pass before all the parts are completely covered.

In patients whose pharynx can be well examined, the false membrane may be seen increasing each day by the addition of new layers which are formed underneath those first developed. These different layers take on a stratified arrangement. The most superficial become softened, and are easily torn; altered in their color by the food, the drink, the matters vomited, the medicines taken by the patient, by blood from the pharynx or posterior nares, these membranes become grayish, black, and resemble the detritus of gangrene. The resemblance is the greater, from the fact that, in these conditions, the false membranes putrefy and exhale a very repugnant, foetid odor. This was the case, you may recollect, with the young girl twelve years old, we recently had under our observation in the ward St. Bernard. Her breath had an insupportable gangrenous odor, and when we removed the detritus which covered the tonsils and the veil of the palate, by means of a pledget of charpie, we found it to be composed of a grayish matter, which was very like the detritus of gangrene. And yet it was not, for when the diseased surfaces were afterwards cleaned, the mucous membranes, but a short time before covered with false membranes, appeared red, hardly excoriated, but showing no traces of gangrene.

This *appearance of gangrene* which the diphtheritic production assumes, is a point sufficiently important to be considered more particularly. It explains to us how, for a long time, diphtheritic angina was confounded with gangrenous angina, and gave rise to the names of *angina*, of *gangrenous sore throat*; names which some physicians use even at this time.

If we study diphtheritic angina in the infant and compare it with what occurs in the adult, we shall observe that the disease almost never presents the gangrenous aspect, which, on the contrary, is very frequently seen in the adult. Should we therefore conclude that gangrene is really present in diphtheria of the adult? No! These are only appearances of gangrene, and do not exist in the adult any more than in the child; there is no true gangrene, unless in exceptionally rare cases; so rare, that, in the whole course of my medical career, I have met only three examples of it. I admit it is very difficult not to believe in it. Even now, although I have so seldom witnessed gangrene in these cases, although I know when a recovery has taken place,

or when, at the autopsy, with the pathological specimens in my hand, I discover no traces of sphacelus upon the tonsils or the mucous membranes, finding only some slight excoriations, and in many cases not even these; notwithstanding this, I cannot at first, even now, disabuse myself of the idea that gangrene exists. In the young girl in the ward St. Bernard, I was sure that there was no gangrene, and you also were convinced of it; still, the extreme fœtidity of the breath, that grayish secretion which covered both tonsils, could not fail to suggest to our minds a mortification of the mucous membrane, a sphacelus of the subjacent cellular tissue, or even a deeper destruction of the tissues.

These are the reasons why diphtheritic angina has been confounded with gangrenous angina; why certain physicians still confound these two diseases; and why, in the description of epidemics of croupal angina, you still often hear of *gangrenous sore throat*, even when they were only pellicular or pseudo-membranous affections.

One word more, relative to the mode of circumscription of the membranous exudations at the points upon which they are developed. Sometimes they are surrounded by a small bright-red line; sometimes they do not appear limited; and, as I remarked in the beginning of my lecture, the false membranous concretion, growing thinner at its edges, spreads out over the surrounding parts. In such a case, the tendency to spread is greater and more to be feared than in the former.

If pharyngeal diphtheritis, left to itself, does sometimes become limited to the pharynx, examples of which have been cited by M. Bretonneau, and which every one may observe in certain epidemics, it usually, however, continues to progress. In some cases it passes into the œsophagus, and reaches even to the cardiac orifice. The distinguished physician of Tours has reported two instances of this character, and Borsieri has instanced others; but almost invariably it invades the larynx and trachea, and constitutes *croup*. This is its ordinary course, the most common termination of diphtheria. In fact, we see more persons affected with this disease die of croup, than from those malignant anginas, of which I shall speak hereafter, which destroy life in the manner of septic diseases.

The propagation of the diphtheritic affection to the larynx was noticed a long time ago. Aretæus speaks of it in his chapter, *De tonsillarum ulceribus*, where you will find the first mention we have of membranous angina, which he designated under the name of *ulcera pestifera*, repeating the names of Egyptian, Syrian ulcer, by which it had been called. Read the histories of epidemics recorded in the annals of medicine, and you will see that the propagation of the disease to the larynx was perfectly well known, and that it particularly occupied the attention of physicians. Whatever name was given to it, the laryngo-tracheal affection is indicated as the cause of death, and hardly anywhere is there any mention of the malignant form of which I have just spoken.

I repeat, then, that persons affected with laryngeal diphtheria die from croup; and I speak not only of that disease which is developed in isolated cases of *sporadic diphtheria*, but also of that which takes place in a great number of cases during an epidemic.

What, then, are the symptoms of that affection called by the Spaniards and Italians of the 17th century, *garrotillo*, *male in canna*; by their physicians, *morbis strangulatorius*; by the Americans, at the close of the last century, *suffocating angina*, and which we to-day recognize as *croup*, a name given to it by the Scotch?

EDITORIAL AND MISCELLANEOUS.

Health of New York, Philadelphia and Baltimore, for 1860.—As our knowledge of Sanitary Science increases, it becomes a subject of special interest to ascertain whether the practical consequences of a strict obedience to its laws are as great as we had anticipated them. On this account, the annual reports of the Boards of Health in all our great cities are of special value to the student of medical statistics. We must try all our theories by their results, and thence deduce our conclusions as to their value or worthlessness. Of course the number of deaths in our growing cities must be greater and greater, as year after year passes by, as the population is increasing; still there may be a diminution of the death-rate, resulting from the adoption of sanitary means which will remove the *foci* of some diseases from such communities. The cause of public health demands eternal vigilance. No amount of money spent in proper hygienic measures in great cities is thrown away. The miserable economy that would trifle with the public health in order to diminish municipal expenses, deserves reprobation at the hands of every good citizen.

The sanitary regulations of our cities are placed in the hands of a Board of Health, deriving its powers from the State and City authorities. The curse of the political maxim, "to the victors belong the spoils," has often fallen upon these Boards, in cases where a really efficient and competent body has been ejected, not on account of unfitness for duties, but simply because their political opinions have differed from those of the reigning authorities. Independent of the fact that science and politics have about as much affinity as oil and water, this principle of ejection and appointment is really a most expensive measure. It takes a certain time for one in the health office of a large city to ascertain the duties of the same, and when he begins to work its machinery with ease so as to benefit the entire community, the political guillotine decapitates him, to make room for some hungry professional brother, not on account of superior fitness, but because the

services of the newly appointed have been more available in the caucuses of the dominant party. It is mortifying to find that all this is done by politicians, who are not supposed to know anything about medical fitness for office; and doubly mortifying to know that regularly educated physicians are to be found in all our cities, prowling around the offices of the civic authorities, clamorous for position, laying their claims upon their partisan politics. These remarks are made without any reference to the Boards of Health of the three cities whose reports are now before us, but to attract attention to the demoralizing influences partisan feelings exercise on the medical profession, and the injurious effects of the same in the administration of sanitary laws.

During the year 1860 the general summary of deaths in the three cities was as follows:

New York.....	{ Males.....	11,918	
	{ Females.....	10,792	
		————	22,710
Philadelphia ...	{ Males.....	6,109	
	{ Females.....	5,459	
		————	11,568
Baltimore.....	{ Males.....	2,559	
	{ Females.....	2,307	
		————	4,866

There are, however, great defects in the mortuary reports in all our cities. Registration laws have been enacted for New York and Philadelphia, which, if carried out, would enable the student of statistics to furnish very valuable material to the municipal authorities for their guidance in the passage of sanitary regulations. But in New York the execution of this law has been interfered with by the refusal of the highest authority, of one of the largest religious bodies, to obey its provisions as regards reporting the number of marriages. The returns, therefore, do not exhibit any statement of value as to this important point in registration. We are also somewhat surprised to find, from the Report of the City Inspector, that the medical profession have objected to the demands on them for a report of births. The Inspector says: "It is maintained by this class of objectors that no law is binding, or can be made compulsory on them, which exacts their time and service to the State and city without an equivalent, forgetting in this comprehensive objection that their profession receive a return in the collating and publishing of statistical information, which is an important benefit, both to that profession and to science. It is my duty, also, to record a fact of more than ordinary moment, that this humane and beneficent law for the registration of births—a

matter of so much importance to the cause of sanitary science—finds opposition among the very class whose leading spirits have been most active for some years past in this city in urging the cause of sanitary reform.”

The Philadelphia Report, in striking contrast with that from New York, congratulates the citizens on the initiation of the law of registration on the 1st of July, 1860, and states that it has been to the entire satisfaction of the Board of Health. “Thus far, the law is popular, and its present success not only affords an evidence of the appreciation in which it is held by all interested, but gives encouragement for its future progress and permanency.”

The Baltimore Report pronounces the mortuary returns, as at present made, as unsatisfactory, and presents a form of ordinance simply designed to insure accuracy as regards reports of deaths. It would have been better to have insisted also on reports of marriages and births.

New York reports, under the present defective method of registering births, 12,454 births during 1860, and Philadelphia 8,434 in the last six months of the same year. We hope that improved legislation will furnish us perfectly reliable data on this important subject before long.

The mortuary reports exhibit an increase over those for 1859, but this is readily accounted for by the natural increase of population. It is exceedingly difficult to get at the death-rate, unless an annual census were instituted in each of our cities. Each of those, whose reports we have examined, seems to have been free from the ravages of any special disease. The death-rate in New York has been gradually diminishing since 1851, as the following table will show:

1851	1852	1853	1854	1855	1856	1857	1858	1859	1860
3.34	2.87	2.90	3.50	2.72	2.44	2.53	2.45	2.44	2.27

The increased per centage in 1854 is accounted for by the presence of cholera. The death-rate in Philadelphia was 1.96 per cent. The death-rate is not calculated in the Baltimore Report, although a table is given which shows the mortality and causes of death for the last eleven years in that city. “The total number of deaths in 1860 was less than it has been any year since 1851, with the exception of 1859 and 1853.” We regret to learn that the municipal authorities of Baltimore have seen proper to change the construction of this Board, which has shown itself to be one of the most efficient in the country. But *tempora* (that is to say, *politics*) *mutantur, nos et mutamur in illis*.

One thing strikes the student in examining these reports, and that is, the necessity of some general plan of registration and reporting, which will allow a comparison of the reports. The Sanitary Conventions, held annually, might be considered as competent for the preparation of forms which should be employed in all our cities, and the advantage of uniformity is too apparent to need any argument in its favor.

All the reports agree in noticing the diminution of the death-rate, where great attention has been paid to the sanitary conditions of our cities. We cannot remove the penalty of death which has been pronounced on man, but we may diminish the tendency to disease arising from man's inattention to cleanliness and health. Real economy demands that the sewerage of a city should be of the amplest character, and that the sewers themselves should be constructed in the best and most durable manner. Carlyle has somewhere said that the brotherhood of man is shown by the readiness with which disease is communicated from the suffering lower classes to the upper, if in no other manner. If no care and attention is paid to the condition of the alleys and courts of our large towns, the retribution will be felt by the irradiation of disease from such foci, to the extreme portions of these towns. The prevention of epidemic diseases, or at least their control, depends upon the adoption of thorough sanitary measures in the obscure and too often neglected portions of towns. Dr. Goddard calls attention to the fact that the mortality has been heaviest in those wards where sanitary arrangements are defective, arising from "the character of a part of the population, the manner in which they live in crowded apartments, in narrow streets, blind courts and alleys, amid dampness and filth, without sufficient light and ventilation, badly fed and clothed; whereas, in other wards, where the population was proportionately larger, but less crowded, and enjoying more of the comforts and conveniences of life, with an adequate supply of light, and sufficient ventilation, the death-rate was comparatively low."

As regards the causes of deaths, it is very evident there will always be inaccuracy in mortuary statistics, in consequence of badly diagnosticated treatment. Our readers will recollect the curious results obtained in one of the European cities, with reference to regular and homœopathic treatment in two hospitals; the *homœoquacks* reported a large number of cures of *severe* thoracic and laryngeal affections, while the number was very small under the care of the regular practitioners, although with them cases of catarrhs were very numerous. Upon examination, *no* catarrhs were reported by the homœoquacks, but each

had been considered a *severe* thoracic affection, and *hence* the percentage of cures under homœopathy was very large. We have been struck by the report of deaths by diphtheria; in New York, 422; Philadelphia, 214; in Baltimore, 7. The number in the latter instance shows the deficiency of mortuary returns, as we happen to know of three, if not four deaths in April, but we find only one has been reported to the office. Dr. Ramsay, in the New York Report, makes the following statements as regards the disease: "It is not contagious. * * It is a curable disease in a large majority of cases." These statements are certainly open to some objection. Doubtless much has been pronounced diphtheria which would not answer Bretonneau's description of the disease, but we are far from being prepared to pronounce it strictly *not* contagious, since the cases of Drs. Frick and Adams incline us to a belief in its *contagious* (employing the word in its proper sense) character; and we are not ready to acknowledge that it is curable in a *large majority* of cases.

Dr. Ramsay, in the New York report, gives as one reason why life in that city is precarious, the excessive restlessness of its inhabitants. There is no doubt of the truth of this. We might reach a more advanced age, if we could adapt ourselves to a more quiet and steady mode of life. This constant wear and tear of brain material, which our country exacts from its citizens, must cause the animal organism to close its career in a shorter period of time, than it would were our habits freed from restless excitement and activity. Figuier, in his *Scientific Annual* for 1860, notices the diseases which may be attributed to the introduction of traveling by railways; and it is a curious subject for study, to see how much injury has been done by excitement and anxiety of mind, with those who are employing this mode of travel. The penalty of civilization must always be paid for in the way of diseases springing from the very improvements which are intended for the comfort or convenience of mankind.

In conclusion, we must express our gratification that the public are becoming alive to the importance of Sanitary Science, and that the reports from New York, Philadelphia, and Baltimore give assurance of this interest. We have used these reports more with the view of making some general remarks on the subject of public health, than for the purpose of review. Sanitary science is still in its infancy, but it has shown wonderful strength, and giant-like capacities. Let it be fostered and nourished by both medical and civil authorities, until all the benefits of which it is capable may be obtained by the human race.

Only a Doctor.—Mr. Thackeray, in his new work entitled “Adventures of Philip on his Way through the World,” has introduced these three words into a conversation held between Old Major Pendennis, who acts as foreman of a jury, and other characters in the story. They are taken by the *Medical Times and Gazette*, for January 19, as the title of a most sensible leading editorial, which we wish we could place entire before our readers. Our limited space prevents, and in place of it we give a few of our own thoughts which the words have suggested. Only a Doctor! The words are sufficiently disparaging to cause us to pause and reflect. Does the humiliating status, sneeringly insinuated in the breathing of that little word *only*, in any degree define the position of the medical profession in this country? We shall not attempt to reply to this question at the present time. It is enough for us to inquire if the medical profession occupies that relative position among the learned professions which it should? Are medical men, as a class, respected, and do their opinions have that weight with the public which their presumed intelligence, as educated men, would warrant? Let the every-day occurrences of life answer this question. Is it not a lamentable fact that our profession, having the most intimate and varied relations with every station of life, and every other branch of science and art, does not possess that high position in the minds of the public which these very relations should obtain for it? With whom rests the fault? Cannot the public appreciate the value and services of the medical man, or does the fault lie within our own body? Before accusing the public, it behooves us to inquire if the petty jealousies, the insignificant wranglings, the ungentlemanly and unchristian gossipings, the bitter backbitings, carried on within our own body, are not enough to make of a dignified and noble profession a by-word and a reproach. They who pander to the love of gossip, who prostitute their talents to disturbing the calm equanimity of the sober practitioner, who strive to array one brother against another, and never cease to stir up and foment the elements of discord, are not worthy the title of Doctor. Such there are, however, whose principal delight appears to be—as it was that of Satan in Paradise—to blight and wither the influence of the noblest profession on earth. They are the ones who bring discredit upon the profession, and hedge in the glorious patrimony which truth, honesty, and intellect give to every one who follows in the footsteps of the Good Physician. He who by word or deed, directly or indirectly, strives to injure his professional brother, degrades both himself and his profession, and must not be surprised if he is weighed by a not

overindulgent public in the same balance in which he has weighed others.

If, then, we wish others to respect us, we must respect ourselves. Before we talk of an inappreciative public, we must appreciate ourselves. Gossips must be avoided, wranglings given over to the bar, the fomenters of disturbances banished, and the vile fabricators of slanderous tales shunned as a pestilence worse than the seven plagues of Egypt.

—The publications of the New Sydenham Society for 1860 were shipped from London several weeks ago, but have not been heard from since. Immediately upon their arrival, the Secretary for New York, Dr. C. F. Heywood, will give notice of the fact, and distribute without delay.

Commencement Exercises in Medical Colleges.—The Medical Department of the N. Y. University held its Twenty-fourth Annual Commencement on the 4th of March. There were 129 graduates, the number of matriculants being 420. The different prizes were awarded as follows: The Gold Mott Medal to Eugene S. Olcott, of New York, for the best dried anatomical preparation; the Bronze Mott Medal to M. J. Moses, of Georgia, for the best record of Dr. Mott's clinical lectures; the Metcalfe prizes to Wm. R. Reypen and Alex. R. Gebbie, for the best reports of this professor's clinical lectures; and the Van Buren Prizes to John D. Murphy and Wm. R. Reypen. Prof. A. C. Post delivered the address to the graduating class.

The New York Medical College held its Eleventh Annual Commencement on the 13th inst. There were seventeen graduates in course, and the honorary degree of M.D. was conferred upon Manuel de Aquiar and D. Pedro Peralt, both of Cuba. The Van Arsdale prizes for the best Theses were awarded to Elnathan Steele and J. H. Guild. Professor B. I. Raphael delivered the address to the graduating class.

The Fifty-fourth Annual Commencement of the College of Physicians and Surgeons took place on the evening of the 14th of March. The degree of M.D. was conferred on 62 young gentlemen. The number of matriculants during the last session reached 264. The President of the College, Dr. Delafield, delivered an address upon the life and character of Dr. Samuel Bard, the first President of the College. Dr. Henry M. Lyman, one of the graduates, delivered the valedictory address. The prizes for the best Theses were awarded to Mans. R. Vedder, of Schenectady, N. Y., and Chas. Carter, of New

York City. The Harsen prize was awarded to John Shrady, of New York City, and another prize to John Elderkin, of New York City.

Dr. Thomas W. Blatchford, of Troy, addressed the graduates.

The Wood and Mott Prizes were awarded at Bellevue Hospital on the 14th of March. The first Wood prize, for the best anatomical specimen, was presented to James B. Cutter, of the Long Island College Hospital, and the second to John Shrady, Jr., of the College of Physicians and Surgeons. The Mott prize was not awarded, but a case of post-mortem instruments was presented to Mr. Eugene S. Olcott, as a token of appreciative regard from the founder of the prize in question.

The ninth anniversary of the New York Ophthalmic School was held February 25th. The class during the last session numbered over 30 students and physicians. Dr. J. P. Garrish, one of the Surgeons of the Institution, delivered an address to the class, and Dr. J. L. Kiernan, one of the class, pronounced the valedictory.

At the Annual Commencement of the Medical Department of Pennsylvania College, held in Philadelphia on Saturday, March 2d, the President, Rev. Dr. Baugher, conferred the degree of Doctor of Medicine on thirty-eight graduates. The *ad eundem* degree was conferred on eight, and the honorary degree on one practitioner of medicine.

The valedictory was pronounced by Prof. B. Howard Rand, M.D.

The Annual Commencement of the Jefferson Medical College took place on Saturday, March 9th. Hon. Edward King, LL.D., President of the institution, conferred the degree of Doctor of Medicine on 186 graduates.

Professor Dunglison, Dean of the Faculty, cordially congratulated the class on the distinction they had attained. The valedictory address was delivered by Prof. Thomas D. Mitchell.

The Jefferson College had 443 matriculants this year.

The Commencement exercises of the Medical Department of the University of Pennsylvania was held on Thursday, March 14th. The Chancellor, Rev. Dr. Goodwin, conferred the degree of Doctor of Medicine on 175 graduates. Of these, 84 were from the free, 87 from the slave States, and 4 were from foreign countries.

The valedictory address was given by Prof. Rogers.

This department of the University had 465 matriculants.

It will be seen from the above, that in spite of the troublous times in the political and financial worlds, the great medical schools of the country have had a very successful season.

The Annual Commencement of the Philadelphia College of Pharmacy was held on Thursday evening. The degree of Graduate in Pharmacy was conferred on forty young men.

—At the Commencement of the St. Louis Medical College, held on the 22d ult., the degree of Doctor of Medicine was conferred on 52 young men. The valedictory was delivered by Dr. Charles W. Stevens.

—Dr. Isaac Wood has been appointed President of the Medical Board of Bellevue Hospital, New York, and Dr. John T. Metcalfe has been appointed to the vacancy occasioned by the death of Dr. John W. Francis.

—We learn that Dr. J. O. Bronson has resigned his Professorship of Anatomy in the N. Y. Medical College and Charity Hospital.

—A new medical journal is to be established in Portland, Oregon.

Physicians in the United States.—According to the *Nashville Medical Journal*, the number of physicians in the United States amounts to 40,481. In Massachusetts there is one physician to 605 inhabitants; in New York, one to 611; in Pennsylvania, one to 561; in North Carolina, one to 802; in Ohio, one to 465; in Maine, one to 884; and in California, one to 860. These facts may be of interest to recent graduates.

—The lectures on Diphtheria by M. Trousseau will be continued in future numbers of the MONTHLY. The authority of the distinguished professor of Hôtel Dieu upon this subject gives to these lectures more than ordinary value. The titles of the lectures, as given in his recent work, “Clinique Médicale de L’Hôtel Dieu,” are Malignant Diphtheritis; Different Localizations of Diphtheria; Buccal Diphtheria; Nature, Contagion, Alteration of the Blood, Albuminuria; Diphtheritic Paralysis; Treatment of Diphtheria and of Croup; Tracheotomy. We shall give all, or such portions of each of these lectures as we think will best suit the desires of our readers.

American Medical Association.—The Fourteenth Annual Meeting of the American Medical Association will be held in Metropolitan Hall, city of Chicago, commencing on the *first* Tuesday in June next.

Each regularly organized Medical Society is entitled to send one delegate for every ten of its members; and each Medical College is entitled to two delegates. It is desired that the names of delegates should be forwarded to the undersigned, as soon after their appointment as practicable.

H. A. JOHNSON,

Assistant Secretary.

Chicago, Feb. 1st, 1861.

THE AMERICAN MEDICAL MONTHLY AND NEW YORK REVIEW.

M A Y, 1861.

ESSAYS, MONOGRAPHS, AND CASES.

A Lecture on Puerperal Convulsions; the Sixth of a Course on the Complications of Labor, delivered in the University Medical College, New York. By T. GAILLARD THOMAS, M.D., Lecturer on Obstetrics in the University Medical College, Secretary of the New York Academy of Medicine, Physician to Bellevue Hospital.

GENTLEMEN—I do not think that it would be possible to give you a comprehensive view of the subject of to-day's lecture, without making some prefatory remarks upon convulsions in the non-pregnant state. In doing this, I will be as brief as is consistent with a faithful exposition of the present state of pathology, on a point about which even now much diversity of opinion exists, and then occupy your attention with those varieties met with in the puerperal condition.

The term convulsion may be defined as a violent, irregular, and involuntary contraction of muscles ordinarily under the control of the will, and from certain peculiarities have been divided into two great classes—tonic and clonic.

An attack characterized by lengthy and continuous muscular contraction is called a tonic convulsion, while one in which the spasm of the muscles is rapidly intermittent, is styled clonic; an example of the first class is tetanus, and of the second epilepsy.

The first of these varieties does not concern our present investiga-

tions; so, leaving it out of consideration, we proceed at once to the second, which may be greatly simplified by a proper division and classification.

All clonic spasms, when fully developed, whatever be their form, may be grouped under three heads:

1st. Simple convulsions.

2d. True epilepsy.

3d. Epileptiform convulsions.

The first includes those convulsive seizures which are general, but are unattended by loss of consciousness, as hysterical and choreic; the second defines its own meaning; the third comprises those which resemble true epilepsy in loss of consciousness, and many other particulars, and yet differ from it in others, which prevent their being treated of synonymously.

Taking epilepsy as a type, as it may well be considered, we have named the third class from its resemblance to this type. In truth, the real difference which at present exists between the second and third forms is, that the second occurs habitually, while the third does not; and that for the second we cannot assign a cause, while for the third we can.

This may appear to be a singular ground for distinction, and yet it is the true one. Who, for instance, would call the convulsions due to teething or crude ingesta epilepsy? And who would not do so, if similar seizures occurred habitually, and without ascertainable cause?

By some authors a variety of convulsive attacks besides these three are cited, but I cannot agree in the propriety of their admission. For instance, "apoplectic convulsions" are spoken of. Now any severe eclampsia may produce apoplexy, which results from the great cerebral congestion accompanying the seizure; or the effusion of a clot of blood upon, or in the substance of, the brain, may by centric irritation produce epileptiform convulsions. But why call these apoplectic convulsions? In one case apoplexy is the result of an epileptic or epileptiform spasm; in the other it produces eclampsia of those varieties, and no one has the right arbitrarily to characterize these by a special name, any more than they would have to call those due to teething dental convulsions, or those arising from crude ingesta gastric convulsions. If it is meant that a peculiar kind of convulsion is very apt to result in rupture of a cerebral blood-vessel, a dangerous error is by this nomenclature promulgated, for, given a fatty state of those vessels, and any, even the slightest seizure, may result in that accident.

All the general and clonic convulsions, then, which you will meet

with in practice, may be classed under one of these heads, let them occur in the child or the adult, the male or female sex, the pregnant or non-pregnant woman.

Having gone so far as this, you will now be able to listen intelligently to the investigation of the question, to which of these three classes belong those seizures which occur in the pregnant or parturient woman, and which are known under the generic term of "puerperal convulsions."

I do not wish you to accept of my statement upon this subject, nor adopt my view with reference to it, without careful examination of, and reflection upon, the grounds upon which I offer them.

As in the non-pregnant, so in the pregnant state, three varieties of convulsions may occur—the hysterical, the epileptic, and the epileptiform; and by many, any one of these occurring in the latter state would be styled puerperal convulsions. This term, however, should as far as possible be confined to those (not simply occurring in, but) dependent upon the state of puerperality. We would not call an attack of pleurisy occurring to a lying-in woman puerperal pleurisy, but if there were a variety of that disease due to, or very much influenced by, the puerperal state, such an appellation would be highly appropriate. So with convulsions. Hysterical convulsions are common in all excited states of the female system, and occurring in the puerperal state, should be regarded as hysteria. Epilepsy, so far from depending in any degree upon pregnancy, is very rare at that time; and even the patient who is liable to that disease in the non-pregnant state, may escape its seizures during the puerperal.

With epileptiform convulsions, however, this is not the case; they are often, in fact generally due to this state, and seldom occur in the adult, without its influence. Therefore the term puerperal convulsions should, I think, convey to the mind of the hearer the idea of eclampsic seizures of epileptiform character; not of hysteria, not of true epilepsy, nor yet of apoplexy, but of a seizure *dependent on and due to the state which gives it its distinctive name*.

This, then, is the restricted signification which I would have you always give to the term puerperal convulsion.

Causes of Epileptiform Convulsions.—The causes of epileptiform convulsions may be enumerated as—

- (a.) Reflex or eccentric irritation, as from dentition, crude ingesta, pressure on the os uteri or vagina in labor, &c.
- (b.) Centric irritation, as in cerebral disease, meningitis, pressure on the brain, &c.

- (c.) Poisoning of the blood by bile, urine, or some of its constituents, carbonic acid, &c.
- (d.) Specific poisons, as lead, strychnia, the various narcotics, &c.
- (e.) Disorder of the cerebral circulation, as from congestion, anæmia, &c.

Any one of these causes existing in sufficient degree in the non-pregnant state would produce epileptiform convulsions, and existing even in less degree they would likewise do so in the pregnant, when the nervous system is in a plus state of excitability, and the reflex influences more than ordinarily acute. At the same time that I admit that any of these causes *may* produce puerperal convulsions, I wish with the utmost distinctness to state my belief that, in the vast majority of cases, poisoning of the blood by some of the constituents of the urine is the great cause of the seizures. I admit the other causes mentioned, not upon the evidence of old writers, who, not being awakened to the frequency of this cause, did not seek for its existence, but upon that of modern observers, who have carefully tested the urine and blood before drawing their conclusions. Thus three distinguished obstetricians of this city, Drs. Barker, Elliott, and Gardner, have informed me of a few undoubted cases of this kind, which have occurred in their practice; and others have been reported in the journals of the day, of the correctness of which I entertain no doubt.

To that class of cases reported in such large numbers, however, as being due to some indiscretion of diet, or to pressure of the head against the os uteri or vagina, (which of course exists in every case,) without any interrogation of the renal secretion for disorder of the kidneys, I have not the slightest respect. However full of sound they may be, they signify nothing; or at most, all that we should admit with regard to them is, that the irritation charged with the whole evil is only an exciting cause; the great predisposing one having been undetected, (probably because unsought for.)

While house-physician in Bellevue Hospital, a young man of robust frame and great muscular development, with every appearance of having enjoyed excellent health, was brought into the wards under my charge in an insensible condition, and presenting the phenomenon of violent epileptiform convulsions. I say the phenomenon, for it is really one to see a perfectly healthy man suffering from true epileptiform convulsions. I could not account for the attack, and treated him upon general principles, among other remedial measures, using an enema of oil and turpentine. This acting, about a gill of cherry-stones were discharged, with very little fæcal matter. The patient

died, and, upon a post-mortem examination, nearly a pint of stones were found in the caput coli, the ascending colon, and the ileum. Now, as it is a perfectly fair and rational conclusion that these stones caused the convulsions which caused the death of the healthy and powerful man, it would be utterly irrational to say that they would not have produced a like result in a hyperæsthetic and excitable pregnant woman. Nevertheless, as such results from such causes rarely occur in the non-pregnant, so do they in the pregnant state.

I have never met, in my own practice, with puerperal convulsions, where in every instance uræmia was not the undoubted cause.

You may then, I believe with safety, fix in your minds the following as an axiom: as a rule, puerperal convulsions are due to uræmia; as a rare exception to this rule, centric or eccentric irritations may be causes of them.

You will recognize in the fact which I have just stated relative to the connection between uræmia and puerperal convulsions, one of great importance; one, indeed, a knowledge of which, has already saved many lives, and which will in the course of time save many more. A half century ago, Hamilton and Demanet noted the fact, that anasarca was very apt to be precursory of puerperal convulsions, but to Drs. Lever, of London, and Simpson, of Edinburgh, belongs the glory of having solved the important problem which has since done such service to humanity. Their views were published simultaneously in 1843, and since that time abundant corroboration has been furnished by many of the first pathologists of our day.

Pathology of Uræmic Puerperal Convulsions.—The probabilities are, that as the pregnant uterus rises in the abdominal cavity, it exerts a hurtful pressure upon the kidneys, preventing venous flow from them, produces congestion, and thus impairs their eliminative function.

From this, result a discharge of albumen in the urine, and an accumulation of some of the elements of the urine in the blood. What the poison is, the collection of which, in the blood, produces the peculiar nervous manifestations which follow, is not clearly ascertained, although numerous experiments which are being constantly instituted for the elucidation of the fact, are surely bringing us nearer and nearer to a just appreciation of it. By some, it is supposed that urea is the toxic agent, but this view is opposed by the weighty names of Bright, Johnson, Frerichs, Rees, and others.

Frerichs it was, I believe, who first promulgated the view that the urea accumulated in the blood undergoes a decomposition which re-

sults in the formation of carbonate of ammonia, which is the hurtful agent.

M. Treiste has advanced an extremely ingenious and plausible view, to the effect, that this decomposition does not occur in the circulating fluid, but that the carbonate of ammonia forms on the mucous membrane of the intestinal canal, and is subsequently absorbed. This receives corroboration from a statement by Bernard and Barreswil, that this substance is found in the intestines of animals the kidneys of which have been extirpated.

I mentioned just now that pressure of the enlarged uterus upon the kidneys was probably a cause of the disordered function of those organs; there is some other agency, however, which must be regarded as active, for tumors and fluid accumulations in the abdominal cavity, which exert the same or greater pressure, do not produce a like derangement. This influence is to be found, I think, in the peculiar state of the blood produced by pregnancy. A misconception was for a long time prevalent among physicians with reference to the state of the blood in pregnancy, many regarding it as being in a state of greater richness than that of the non-pregnant condition; in other words, that the pregnant woman is plethoric. Now, if the term *plethora* is employed to signify a "fullness," or great amount of circulating fluid, this is true; but it is not so if it be used, as it often is, to indicate that the blood is rich in red corpuscles. Andral and Gavarrel, Becquerel and Rodier, and other equally eminent men, have analyzed the blood of numbers of pregnant women, and pronounced it to be, on the other hand, in a watery state, which receives the name of *hydræmia*.

The following are the statements of Becquerel and Rodier: "*Recherches sur la Composition du Sang, 1844.*" "These are the alterations which it (*i. e.*, the blood of pregnancy) undergoes:

Diminution of the density of the blood defibrinized, and of that of the serum.

Increase in the proportion of water.

Great diminution in amount of the globules.

Slight increase of the fibrin.

Diminution of the albumen of the serum, &c."

Dr. Rees believes that such a state of the blood is peculiarly conducive to the action of this toxæmia; and Dr. Todd, in his *Lumleian Lectures on Delirium and Coma*, (*Med. Gaz.*, 1850,) makes a similar statement. It is not unlikely that both of these causes are active in bringing about the results.

The occurrence of convulsions with first pregnancies is much more

frequent than with subsequent ones; a fact which is probably due to the rigid and unyielding abdominal walls pressing the uterus more firmly against the kidneys than they would do in multiparous women, in whom they are lax and yielding.

Lachapelle had $\frac{7}{8}$ of her cases with first pregnancies.

Ramsbotham $\frac{2}{3}$ of his “ “ “

Merriman 28 out of 38 “ “ “

Collins 29 out of 30 “ “ “

Dr. Tyler Smith remarks: “It is a very old and true observation, that convulsion is often met with in single women whose minds have been depressed by the sense of shame and misery inseparable from their condition during gestation.” With all due respect, I would suggest as an explanation of this “old and true observation,” much more accordant with the enlightened pathology of the time, that unfortunates thus circumstanced are anxious to conceal their shame, and, by tight lacing, press the uterus with great force against the kidneys and disorder their eliminative action.

Premonitory Symptoms.—Of course it will always be very important for you to recognize the fact that your patient runs a risk of convulsions at as early a period as possible in order to establish, as soon as your suspicions are excited, a course of preventive treatment. Let me strongly recommend to you, through your obstetric careers, to examine the urine of every pregnant woman who shows symptoms which cannot readily and satisfactorily be accounted for by the mere existence of the puerperal state, and do this more especially if œdema of the face or feet should be noticed. There are so many obscure symptoms which you will find due to puerperal uræmia, that I advise you not to wait for your suspicions to be aroused with reference to renal disease, before testing that secretion, *but always to do so as a matter of routine in the diagnosis of puerperal disorders.* Should you, after such an examination, in any period of pregnancy find the urine albuminous, and more especially should the microscope reveal in such urine tube-casts or renal epithelium, always be watchful for the occurrence of eclampsia of dangerous character, and put your patient upon preventive treatment. Do not understand me that, whenever albumen and tube-casts are found in the urine of a pregnant woman, she will have convulsions; this is by no means true, for in the vast majority of cases they will not occur, and that, too, without special preventive treatment.

In twenty cases of puerperal albuminuria, Devilliers and Regnault had eleven cases of convulsions out of forty-one cases; Blot had only

seven cases of convulsions, and Cazeaux gives the proportion as one-fourth or one-fifth.

The knowledge gained from an examination of the urine will generally be the only reliable information which we can get at any period distant from the attack, but just before the attack occurs there are a number of premonitory signs which will excite our suspicions. Among these may be mentioned drowsiness, fretfulness, despondency, dizziness, violent headache, partial anæsthesia, amblyopia, *muscæ volitantes*, impaired vision, substernal or epigastric uneasiness or anxiety, with a sensation as if of sinking, *trinitus aurium*, deafness and stertorous breathing during sleep. Study the symptoms of uræmia in the male, and you will find them identical with these; now the question arises, are the prodromata of epileptiform convulsions not due to this cause the same? Never having seen a case unaccompanied by uræmia, I cannot say but I should suppose that many of the symptoms just detailed would be absent.

Symptoms of the Attack.—You will be at no loss for a diagnosis, even in your first case of this terrible malady, for there is nothing with which you could confound it, except with a similar seizure, due to hysteria or epilepsy. In the beginning your attention will be attracted to the patient by a turning over of the eyeballs, so that only the whites remain visible; then the inferior maxilla will be drawn to one side of the face, the lips puckered so as to cover completely the teeth; the head turned upon the neck, the occiput drawn towards the spine, and soon the flexor muscles of the arms act powerfully upon those members, flex the fingers, and bring the forearms upon the chest. All these contractions take place in rapid succession, and for a time the convulsion seems clonic in character; but soon the arms jerk violently, the head is moved rapidly upon the neck, the jaws open and close with great force, a deathly pallor or lividity overspreads the face, froth more or less deeply tinged with blood oozes from the violet lips, the woman begins to take full and stertorous inspirations, and the seizure passes off. After a short sleep the patient will wake, look confusedly at her alarmed and distressed attendants, and perhaps in a half-conscious manner ask what has occurred. This attack will, after an indefinite time, be followed by another, and after two or three have occurred consciousness is generally abolished in the intervals, and stertorous breathing and a semi-comatose condition last from fit to fit. The number of convulsions which may occur before the case terminates, the frequency of their occurrence, and the

severity which characterizes them, will of course depend entirely on circumstances governing each individual case.

Frequency.—Fortunately, this dangerous complication of parturition is not of frequent occurrence. In one thousand deliveries at the "Hospital of the Clinic," Velpeau met with not a single case; but this exemption was remarkable, the estimated proportion being about 1 in 485 deliveries.

Differential Diagnosis.—The differentiation of true puerperal convulsions from the epileptic and hysterical seizures which may occur in the puerperal state, is based upon the same principles which would govern the same destruction in the non-puerperal condition. That it is true epilepsy, will be known by the fact of the patient having been liable to attacks of that nature previously, and the conclusion thus based would be strengthened by discovery of a healthy state of the urine. Hysteria will be recognized by partial consciousness during the attacks, by their lengthy duration, by their slight intensity, and by the general hysterical behavior and character of the woman. There is a peculiarity in hysterical seizures, which can be gathered only by observation, but cannot be written, which will generally enable the physician to determine as to the true nature of the case; though sometimes the most skillful diagnostician is puzzled to decide.

Prognosis.—The prognosis of true puerperal convulsions is very grave for both mother and child.

According to Braun, one-third of the mothers die; according to Churchill, one-fourth; and Bomberg says one-half. In my experience, one-fourth have died.

It is a very significant fact, that those cases of uræmic convulsions accompanied by œdema are not as dangerous as those not thus accompanied. The reason appears to be, that the effused serum contains an appreciable amount of urea, which is thus gotten rid of by the blood. Of 4 cases without œdema, Blot lost 3; of 3 cases with œdema, he lost 0. In 2 cases without œdema, Regnault and Devil-liers lost both; of 9 cases with œdema, they lost 5. Cazeaux gives the mortality of those cases with œdema 11 in 55 +; of those without it, 7 in 15. Bear this in mind, not only on account of its great interest and importance, but because I will return to it very soon, as we progress, and base upon it what will, I think, at a future period, be considered an important point in treatment.

Unfavorable as is the prognosis for the mother, for the child it is more so. It may be safely stated, that it is a very exceptional oc-

currence for a child born of a mother who has suffered from even a few violent convulsions, to recover.

Causes of Death.—The attacks may recur with varying rapidity and severity, until the exhausted patient is destroyed, or the very first convulsion (as in a case recorded by M. Depaul) may snap the thread of life. In addition to exhaustion from oft-repeated attacks, the life of the woman may be destroyed by apoplexy, the result of rupture of one of the cerebral blood-vessels; asphyxia, the result of spasm of the glottis and muscles of respiration; intra-cranial or pulmonary serous effusion, the result of transudation through the walls of the distended capillaries; coma, the result of cerebral congestion; or paralysis of the heart, the result of violent spasm of that organ.

I was for some time under the impression that death was attributed to the last of these causes, upon grounds which were purely theoretical; but witnessing a case in which I believe that death thus occurred, has caused me to change my mind. The case was this: A young Irish woman, to whom I was called by the late Dr. Murphy, of this city, was suffering from repeated attacks of the most violent convulsions. I was standing by her side, with my fingers on the pulse, which was beating with a fair amount of force, when a seizure took place. It passed off, and the heart, beating once or twice very feebly, ceased entirely to act in less than ten seconds.

Now, we had here no evidence of injury done to the brain; the woman did not die of asphyxia or exhaustion, and I know of no way in which to account for the sudden death than by supposing that the heart, overcome by violent spasm, refused to perform its function. Even if great cerebral lesion had occurred, death from it would not have been so instantaneous. Persons affected by apoplexy never die *instantaneously*; those who die of cardiac disease often do. In the case just detailed I performed the Cæsarean section, but the child was dead.

If the patient seems to be improving, and the convulsions have ceased, a prognosis with reference to the probabilities of their return will depend, I think, more upon the amount of albumen found in the urine than upon anything else. Should this substance diminish rapidly, a very favorable prognosis may be made; but never should the patient be regarded as out of danger until it entirely disappears.

As regards the prognosis to be made with reference to the probabilities of a return of the kidneys to a healthy state after delivery has taken place and the convulsions ceased, I should say that it should be generally decidedly favorable.

Causes of Infantile Mortality.—The causes for the great infantile mortality observed in such cases are these: The placenta, compressed by abdominal spasm, and supplied by poisoned blood, ceases to exert a proper influence on the blood of the fœtus; or the child, suffering from uræmia like its parent, may die of intra-uterine convulsions. Even if born alive, its chances for life are not good, for many infants thus circumstanced die within the first twenty-four hours of their existence.

Even after the disappearance of the convulsions, after the accomplishment of the labor, and after convalescence under ordinary circumstances might be considered fully established, the prognosis for the mother is rendered grave by the fact that such cases are often subject to uterine inflammations.

Preventive Treatment.—Having been led to believe that there is a probability of puerperal convulsions in any case, these I believe to be the best means for avoiding the disastrous issue. Let the diet be light and nutritious, and let it consist of very little animal food; see that the bowels are kept very regular by means of saline cathartics; direct the patient to take regular exercise in the open air, avoid late hours, heated rooms, exciting company, and stimulating drinks; and keep the skin as active as possible by occasional warm baths, friction, and appropriate clothing. But above all, let the patient be delivered under the influence of chloroform, unless some very powerful objection should exist to its use. By these means you will often be able to prevent the occurrence of threatened convulsions, if you are forewarned of the threat a sufficient time before the *dénoûment*; and in some cases you may prevent the issue, even if you are made aware of its approach, just before the attack occurs. Let me give you an example of what I consider a case of convulsions prevented. Mrs. S., a lady who had borne two children, had passed through her third pregnancy without much trouble, and sent for me one afternoon in December, 1860, on account of commencing labor. The os was just beginning to dilate, and supposing that the labor would come on during the night, I retired to an adjoining chamber, requesting the nurse to call me when the parturient process should have progressed so far as to make my presence necessary. About five the next morning, Mrs. S. sent for me on account of a very violent headache, which had caused her to cry out, so great was its severity, and when I saw her she was rocking herself to and fro, and complaining bitterly. The nurse drew my attention to the fact that her face had become much puffed, and told me that during the night she had complained of ring-

ing in the ears, flashing before the eyes, and great nervous trepidation. At that moment she complained of great dizziness, and stated that the figures of the carpet seemed to be rapidly revolving. She was not an hysterical, or even a very nervous woman.

The pulse was full, almost bounding, and somewhat accelerated.

Obtaining some of her urine, I examined it with heat and nitric acid, and found that it was loaded with albumen.

I now administered a very active saline cathartic; caused the patient to keep her bed, and got some chloroform ready for use. I did not employ it, however, because her husband was very violently opposed to it. The labor progressed steadily, when just about the end of the first stage, a slight twitching was observed in the muscles of the face, and very slight turning of the balls of the eyes. She was now instantly put under the influence of chloroform, and kept so to the end of the labor, which was happily concluded for both mother and child. It may be said, with reference to my conclusions in this case, that they are illogical, from the fact that, even without the use of chloroform, she might have escaped what I deemed so imminent. This I allow, but I submit that few cases with so much albumen in the urine, and fewer still with so well-pronounced natural signs, escape the dread climax. I have always felt a conviction that without the preventive means adopted, that lady would have passed through a fearful ordeal, which was by them avoided; and this is not an isolated case in my experience, but is mentioned merely as a fair type of a class.

I cannot leave the subject of preventive means without offering for your consideration the question as to the propriety of the induction of abortion or premature labor in those cases where the uræmic poisoning is very great, and is evidently increasing as pregnancy progresses. I am not in a position to advise this, but it appears to me to be well worthy of consideration; and I can easily imagine cases in which the maternal and foetal life might both be saved, by induction of labor at the beginning of the eighth month, which would be lost at the end of the ninth.

Treatment of the Attack.—As the treatment of the attack will primarily consist in shutting the avenues by which death may approach, let us see what these are. They may be thus recapitulated:

a, Apoplexy.

b, Asphyxia.

c, Serous effusion.

d, Coma.

e, Exhaustion.

f, Paralysis of the heart.

In view of these, the indications of treatment may be enumerated as follows:

1st. Check the convulsive action at once, and thus prevent death by asphyxia, the cerebral conditions resulting from congestion and failure of the heart to perform its function.

2d. Diminish vascular turgescence and excessive action, and thus remove the great liability to apoplexy and coma.

3d. Evacuate the uterus, if possible, because experience has proved that in the majority of cases the seizures will then cease, and because we thus remove pressure from the kidneys.

4th. Eliminate or neutralize the poison accumulated in the blood.

To accomplish the first of these indications, no means is at all comparable with the anæsthetic influence of chloroform. Blood-letting is, in my mind, far inferior to it in its results, much more unreliable, and accompanied by much greater dangers. No greater boon could be conferred upon the obstetrician than the power of controlling these terrible convulsive seizures, and I do not believe that I exaggerate when I say, that in many, nay, most cases, such a power exists in chloroform. Ether, from the stage of excitement which it produces, is not so applicable to these cases, and, in some instances, I have found its use entirely inadmissible, while chloroform has accomplished immediately all that I desired. If serious injury, such as effusion of serum or blood, has taken place in the brain, anæsthesia will accomplish, probably, nothing; but if it be resorted to early and fearlessly, its results will surprise you.

So anxious am I, gentlemen, to fix what I believe to be a proper impression upon your minds concerning this important point of our subject, and at the same time not to say more than my experience warrants me in asserting, that I will beg your attention to the account of three cases which illustrate the matter more fully than any other means would do.

I was called to a primipara whom I had delivered six weeks before, and who had, subsequently to delivery, suffered from a slight attack of puerperal mania, and found her suffering from a most intense headache, dizziness, and confusion of mind. Her pulse was so full, and her general appearance aroused my suspicions of approaching convulsions to such a degree, as to lead me at once to test the urine, which I found to be loaded with albumen. I immediately went for chloroform, and returning, found her in a fearful convulsion, which, in spite of the ef-

forts of her attendant, had thrown her from her bed to the floor. As soon as it passed off, I put her fully under the influence of chloroform, which quieted her so, that she slept placidly for about two hours. Her family appearing very apprehensive about so free a use of the anæsthetic, I then agreed to discontinue it, to learn whether the seizures would return. No sooner was she fully awake than another, if possible, more violent than the first, came on. This I tried three or four times with the same result, and the patient was kept more or less under the influence of the anæsthetic for about forty-eight hours. During this time, she would sleep quietly for one or two hours at a time, without the inhalation of the drug, and her strength was sustained by nutritive enemata. She recovered, and the albumen gradually disappeared from the urine.

The two other cases I saw with the late Dr. John W. Francis, whose decease has so recently spread a gloom over the medical profession of New York, and so closely do they resemble each other that they may be related together. Both were primiparæ; in both the lancet was freely used, without checking the attacks, which really seemed to me to increase under the sanguineous loss, and in both chloroform acted most perfectly. Dr. Francis was at first much opposed to its use, but seeing that all other means had failed, and knowing that death would surely be the result if the oft-repeated and very violent attacks were then not checked, he consented to its use, and in neither case did he hesitate to say that the successful issue was due to its influence. One of these ladies was kept under it for about eight hours; the other about sixteen hours; in the latter, the cessation of the anæsthetic effect on two or three occasions resulted in return of the eclampsic seizures, as it did in the first case related.

To obtain the full results of anæsthesia under these circumstances, the influence must be kept up steadily and unintermittingly for twenty-four, forty-eight, or a greater number of hours, if necessary.

I do not mean that the patient must be all that time under its full influence, but that she should be sufficiently under it to effect the object in view, if it can be effected by this remedial means. But one person cannot do this, and I think that, in these cases, a capable assistant should always be associated in the case, whose entire time can be given up to it.

Should it be absolutely necessary, an intelligent non-professional assistant may be intrusted with the administration of the chloroform; but this is attended by risk, and should never be done until that individual is properly instructed by the physician, and made to gain

some experience in his presence. You may say that there must be a good deal of risk in this. I answer, there is less than in leaving the patient without the anæsthetic influence, and it is only in the face of this alternative that it should be run.

If anæsthesia controls the convulsions, blood-letting should not be resorted to; should it fail to do so, it should then be taken into consideration, and decided upon by the same reasons which would govern such a decision concerning it in pneumonia or any other diseased condition. In other words, you should not bleed because the patient has puerperal convulsions, but because some special indication, as the evidences of plethora, or too violent vascular action, for example, should point to its necessity.

Remember that, although the pregnant woman be hydræmic, she may at the same time, in one sense of the word, be plethoric; that is, there may exist an excess of blood in the system. This is called "serous plethora," and may be temporarily much relieved by the lancet, although the secondary effect of the loss is to increase the state of hydræmia. Venesection may be performed, for two reasons, in abnormal states of the circulatory system: first, to alter the state of the blood; and second, to diminish the mass which is passing through the blood-vessels, which are perhaps distended by its great amount. In puerperal convulsions it effects good results, (when it does so at all,) by accomplishing the second end at the expense of the blood's chemical state.

It is not against blood-letting that I wish to guard you, but against its indiscriminate and invariable employment; and this I do because I feel convinced that I have seen much injury done by the lancet under these circumstances. Still, I do not hesitate to employ it in those cases where I find it necessary to accomplish the second of our enumerated indications, namely, the diminution of vascular turgescence and action.

We now approach the third indication, the evacuation of the contents of the uterus. If any general rule of action could be given with reference to this point, it should, I think, be to this effect: if the os has begun to dilate, encourage and hasten the labor so soon as the convulsions are at all controlled; should the woman not be at term, endeavor to manage the case without the induction of labor, leaving it as a dernier resort, but practicing it when other means fail to check the returning seizures. I have seen a case in which chloroform entirely quieted violent convulsions coming on at the eighth month, and the lady went to term, and was delivered without a re-

turn, but subsequently died from other effects of uræmia. Her child died at the time of the occurrence of the convulsions, and was putrid at the time of birth. If you deem it advisable to bring on or hasten the labor, pass a sponge-tent into the os uteri, use the warm douche freely against this and the encircling fibres of the os, and employ the colpeurynter or a bladder placed in the vagina and filled with water. Should the os be dilated, stimulate the fibres of the uterus, by placing a gum-elastic catheter between the membranes and the uterine body, or deliver by version or the forceps.

Sometimes the bag of waters may be ruptured with advantage.

When the head of the child gets within reach of the forceps, my impression is, that it is always safe to deliver it, for every moment's delay adds to its danger. This should of course be done only when the foetal heart is heard distinctly to be acting, for the operation is here performed for the child's benefit alone.

The means adapted to the accomplishment of the fourth indication are these: The kidneys being crippled in their functions, press other emunctories into service, and make them supplementary to these organs. I told you that Bernard and Barreswil had found the mucous membrane of the alimentary tract to be covered with carbonate of ammonia, and that Treiste supposes that from this part of the economy it is absorbed into the system. However this be, it is advisable to act freely on that surface by active cathartics; if the patient can take them, I give by preference the salines; but if she cannot swallow, croton oil may be employed. The skin is often largely supplementary to the kidneys, and this should be made to act by the hot-air or vapor bath. In addition, dilute citric or benzoic acid should be freely given, with the hope of forming in the blood citrate or benzoate of ammonia. The former may be given in the form of lemonade.

I have asked you, in the course of this lecture, to bear in mind the fact, that those cases complicated by œdema were much more favorable than those without it. Now, it seems to me that œdema produced artificially, by ligatures applied around the arms and legs tight enough to interfere with venous return, but not to obstruct arterial flow, ought, upon logical grounds, to do good; and I recommend you to make trial of it. In this way a large supply of blood may be kept off from the general circulation, and in a less hurtful way than by venesection; and for this purpose, such ligatures are recommended by Braun and others. I advise it for a different purpose, but, at the same time, recommend you to employ it for purposes of hemostasis if desirable.

By the artificial production of œdema, I think that benefit might very likely result from the fact that the serum infiltrated into the cellular tissue is loaded with urea, and thus the blood is to a certain extent deprived of its dangerous properties. I have resorted to this means in one case, but I saw no good result from it there. In warding off death by these approaches, do not forget that exhaustion may destroy life, and always support the strength by fluid food or enemata.

Sometimes, in the convulsions occurring after delivery, opium in full dose is found highly useful, but its use at all times, in these cases, requires great caution.

You may be struck by the fact that I recommend, in enumerating remedial measures, only very prominent and important ones, and leave many others which are ordinarily advised, as, for instance, asafoetida, valerian, camphor, the use of sinapisms, cold effusion, &c., &c., unmentioned. My reason for this is the belief that, ordinarily, perfect quiet, silence, and absence of light are more important adjuvants than they, and that the physician should studiously avoid disturbing his patient by doubtful means. Some years ago, to demonstrate the importance of such quietude, I immersed a number of half-grown frogs in a jar of water which contained strychnia. They were, after a little while, seized with violent convulsions, and removing them, I placed them in the presence of the class, under a bell jar. As long as all was quiet, the little animals were free from spasms, and seemed instinctively to be keeping very still; but no sooner did I tap upon the glass or remove it and blow very gently upon them, than they would be violently and repeatedly convulsed. I once heard Dr. Marshall Hall say, that having poisoned a young terrier with this drug, he could smooth his hair down without causing spasms, but every time that he passed his hand in a contrary direction and rubbed the hair upward, convulsions would take place. This he addressed to a house-physician at one of the hospitals in this city, who was at the time applying mustard and friction to a patient who was suffering from uræmic convulsions. Bear it in mind when you are prompted to harass and annoy your patients with the hope of removing the tendency to coma by revulsive means. There are, however, circumstances in which these means may be indicated. In concluding, let me, with the hope of leaving a complete picture on your minds, place before you a synopsis of the treatment of puerperal convulsions:

1st. Bring the patient fully under the influence of chloroform.

2d. *If the indications demand it*, practice venesection.

3d. If labor has commenced, hasten it. If it has not, endeavor to

avoid the necessity of inducing it; but if you cannot, do not hesitate too long about its accomplishment.

4th. Act freely on the bowels and skin; apply cold to the head; give lemonade freely, if the patient can swallow; apply ligatures around the members, and support strength by nutritive fluid food or enemata.

5th. Bear in mind that the prolonged use of chloroform is not near so likely to kill as a return of the convulsions is.

On Paralytic and Convulsive Diseases of the Cerebro-Spinal System, including Epilepsy, its Physiology, Pathology, and Treatment. By H. P. DEWEES, M.D., New York.

(Continued from page 265.)

From what has been necessarily so hastily said, it is easy to perceive how narrow are the boundaries which are assumed, and how insensibly they merge into each other, as to the medulla oblongata or the brain being the originating seat of epilepsy. But it is well for practical purposes to remember that the spasms, for the most part, occur in those muscles deriving their innervation from the nerves of the medulla oblongata, viz.: the facial, the accessory, the hypoglossal, and the third branches of the fifth. It is also convenient to recall that for the most part the functions of the medulla oblongata are bilateral, corresponding to the muscular exhibitions in true epilepsy.

But there are seizures with epileptiform convulsions which, at their first incurrance, render the diagnosis between them and true epilepsy somewhat difficult. A stout, plethoric man may be suddenly struck down, and by the time the by-standers have summoned medical aid, he may be found epileptically convulsed, and insensible. There is both stertor and foaming at the mouth, but the respiration, although labored, is yet freer, and more regular, than in true epilepsy. The pulse varies, but it is rarely slow and hammer-like to the touch. The mouth, instead of being bilaterally acted on, is drawn more to one side than the other, whilst the facial muscles, in the intervals of spasm, appear unequally relaxed. The coming-to is longer than in uncomplicated epilepsy; the mind is more sluggish, and the voluntary transmissions, either for motion or speech, are impaired or imperfect. The arm and leg of one side become inactive, the speech is thick, indistinct, or confusedly labored. These and other paralytic conditions point to the brain as being the chief seat of lesion, although from some cause there may have existed at the time irritability of the medulla ob-

longata, which has been called into active participation by irritative lesion of the conducting fibres. Cerebral hæmorrhagic laceration has been found in some of these cases, and accounts for the symptoms which progressively occur. At intervals, other attacks ensue; and although insensibility may be the earliest symptom in a particular case, yet in others the spasmodic actions first evince themselves. These varying resultants depend as much on the situation of the hæmorrhage as on the quantity and rapidity of the effusion. I have known the pressure so gradually made, that the patient has stated he felt drowsy, and whilst apparently asleep, the stertorous respiration of apoplexy would ensue, quickly followed by the head being drawn rigidly to one side, whilst convulsive movements pervaded the extremities, and sometimes the trunk. At every renewal of the hæmorrhage the same symptoms are repeated.

During the reparative processes in these epileptiform apoplexies, insensibility may not again occur; but from the contraction of the clot, and other efforts towards cicatrization or repair, spasmodic twitching or convulsions of the facial muscles especially, may recur. The spasms are in most cases unilateral, and on the side opposite to the cerebral injury; thus, in the very beginning, the convulsions are epileptiform, but not epileptic. The post-objective appearances also differ from those of true epilepsy. On opening the mouth, the whole palate may sometimes be seen to be so relaxed as to fall on to the tongue, or one side only droops, with the uvula horizontally retracted. The constrictors of the pharynx are sometimes paralyzed, and the food, collecting in the pouches at the base of the tongue, becomes a source of intense misery, from the liability of portions to fall into the opening of the glottis on raising the head, thus inducing suffocative efforts for their dislodgment.

The accessory nerves of Willis, which act on the muscles of the larynx, and on the constrictors of the pharynx, together with the palatine ramifications of the second branch of the fifth, appear to be chiefly affected. Nor is it uncommon to find the œsophagus in the reverse conditions of contraction or dilatation; these structural differences depending upon the local nervous conditions of irritation, or of paralysis. A more immediately dangerous condition exists from the incurrence of œdema of the glottis. In one patient this was a rapid cause of death, whilst the difficulties from the paralytic retention of portions of the food, and its delay of transit through the œsophagus, existed in a most pitiable degree.

The after-effects of an epileptic attack in some patients require

discrimination. In many there are no prominent sequelæ, but in others simulative disorders arise. Deglutition, both voluntary and reflex, may continue difficult. The lungs may assume a pneumonitic, bronchitic, or asthmatic state. The stomach may reject its nourishment, or refuse to digest. The heart may be deranged in its rhythm or sounds. The diaphragm may be acted on through direct irritation, producing explosive cough, hiccup, sighing, or anhelation. The abdomen may shrink from the slightest touch, as in inflammatory invasion. The kidneys and bladder may pour out their irritating contents, scalding the urethra in its passage, or complete suppression may ensue. The urine may become albuminous, and deficient in extractive matter, or it may be loaded with lithates, purpurates, and other materials arising from the surcharge of animalized decomposition, or from the insufficiency of function in other organs. These conditions, although for the most part transitory in their excess, yet are to be carefully examined into, inasmuch that they may serve to point out some latent difficulty, which has stealthily induced morbid states of nutrition in the nervous centres implicated in the phenomena of the epilepsy itself. The variety of remedies which have proved successful in different cases indicate the truth of the above assumption, and inculcate the doctrine that, although the nervous phenomena of the fit itself have their starting-point in certain regional bounds, yet the origin of the disturbances in the normal nutritive actions of these districts must be for the most part searched for elsewhere. For the structural changes which ensue during the epileptic condition are not peculiar to that disorder alone; they occur in other disorders as well.

In chronic epilepsy, the intellectual faculties are prone to become weakened and changed. Perception and volition, the simplest conditions of mind, become enfeebled or vitiated. Irritability passes into more or less continued excitement, which, after a time, may assume at first the form of temporary mania, again to be tempered down to partial imbecility or complete idiocy, or to be increased into hopeless lunacy. In some, there is intermittence, but no respite. The epileptic expenditure may exhaust the frame and restrain the maniacal manifestations for a varying interval, but to recur in new force, till death takes place.

Statistical records show that four-fifths of epileptics become subject to more or less mental alienation. Dementia is more frequent than mania. As might be supposed from the vast amount of morbid action discovered in the brains of the epileptic, monomania rarely occurs.

But it is to be remembered that the monomaniacal may become subsequently epileptic.

As before mentioned, the causes of epilepsy are various; but from the instinctive passions, none so frequently conduce to its incurrence as the venereal, when indulged in to relative excess. It is an instance of the infringement of the law already cited, viz., the correlation existing between the central and centripetal nervous actions, independently of nutritive disturbances. Irritation or injury of the cerebellum is frequently attended with derangement of the genito-urinary system; whilst the disorders of the sexual organs, and especially when arising from overindulgence, usher in qualificative alterations of nutrition and function of the basilar contents within the occiput. The recognition of these neural reciprocities is highly important, both in a diagnostic and in a therapeutical point of view.

The necro-statistics of epilepsy are generally unsatisfactory. The intercurrent morbid changes of the complications have not been satisfactorily distinguished from the pathologic essentiality. Post-mortem changes have not been rigorously separated from the nutritive alterations happening during life, and which were either causes or the sequences of the attacks. Reparative processes ensuing during the retraction of the disorder, or perhaps long anterior or subsequent to the epileptic phenomena, have been frequently set down as elemental departures from normal structure; whilst the true morbid sources have not been compared in their various stages with the symptoms in their periods of manifestation.

The localization of the originating causes of epilepsy has ever been a matter of dispute, and will continue to be, so long as the phenomena are mistaken for the existing causes. Wenzel regarded the pituitary body as being the chief pathologic seat; yet I have in more than one instance seen this body greatly diseased without any epileptic tendency, but in none without great derangement of the general nutrition. In two cases there was unbearable ophthalmic neuralgia, with distortion of the eye, apparently confirming the statements of Littre and Lieutaud that some of the branches of the fifth and sixth pairs of nerves penetrate this body, but which have not been demonstrated by other anatomists.

In one case the emaciation was extreme, although nourishment was taken in large quantities. Involuntary spasms affected the face, tongue, neck, and shoulders, but unattended by loss of consciousness. The spasms may be termed epileptiform, but not epileptic, as previously remarked when speaking of the unilateral facial spasms during cerebral

hæmorrhage. Had irritability of the medulla oblongata existed at the time, there might have been excited a true epileptic seizure, with cerebral unconsciousness.

Hereditary transmission has been statistically proved to exist in about one-third of the individuals affected; a proportion much greater than can be traced from any other one cause. But in what the essential nature of this transmission consists, whether in deviation of the structural or dynamic conditions of the ultimate cell, in which a specific so-called "taint" is engrafted, or in some elemental changes in the nervous structures themselves, or in local hypertrophies reproduced in the offspring, or in certain radical alteration in the constituents of the blood, sufficient data have not yet been collected to justify the adoption of any one in preference to another.

From my own observation, the children of the scrofulo-tuberculous are more prone to epilepsy, other things being equal, than are those in whom no such dyscrasia exists. The causes of this epileptic tendency arise chiefly from certain regional development of tuberculous matter within the brain, whereby its irritation or an exalted sensibility of the medulla oblongata is established, and from the erethism of the general nervous system, so commonly the attendant of this peculiar diathesis. Indications of tubercle, in the pulmonary tissues especially, are found in many in whom the epilepsy has been more or less chronic. Their original incurrence, or their development as sequential to the strain on the lung during the fits, must be diagnosticated on examination of the cases. The irritative or convulsive cough, with more or less bronchitic râles, especially in children who are growing rapidly and retain an outline of comparative vigor, should not lead into an erroneous belief of the lungs being primarily affected. These bronchial conditions, in very many cases, proceed from an exalted sensibility of the respiratory centres, and yield more rapidly to derivatories at the upper cervical portion of the spine, than to pectoral syrups. In some, smart slapping on the neck and shoulders relieves the convulsive coughing and shortness of breath. If, after a time, the irritability of the medulla oblongata increases, cerebral disturbances from the suffocative or long-continued coughing ensue, and the child, complaining of vertigo, becomes suddenly unconscious, and is attacked with the convulsions of epilepsy. The same frequently occurs in persons of more advanced age, who, from frequent masturbation or excessive sexual indulgence, have impaired the general nervous system, as well as excited an erethism of certain central districts. From the recovery attending many cases of so-called pulmonary consumption

under my charge, in whom the central nervous causes were early recognized, I can attest to the soundness of the pathological statements just offered, as to the pulmonary sequences without epileptic disorder.

The period for the exhibition of these hereditary influences lies chiefly between the first and the twentieth year. And this predisposition has some curious features. The child may be attacked before either the mother or father has exhibited at the time any epileptic tendency, of which I have seen several instances. Although excesses in venery or masturbation, and the changes incident to the period of menstrual decline, have been stereotyped as the most efficient productive causes, yet, when viewed apart from the coincidental or sequential regional derangement of the medulla oblongata, they form less frequent conditions than supposed. Vast excesses or severe menstrual difficulties are daily occurring without any noticeable convulsive disorder. But when from any cause the neuro-relations of the medulla oblongata, or of the districts behind or before the thalami, are disturbed, then epileptic, cataleptic, or other departures involving the normal reciprocations between the cerebral and spinal functions may be engendered. In the old, the very changes incident to their age may produce epilepsy, (with more or less paralysis,) since ossification, obliteration, or dilatation of either the great or small arteries may become an inductive cause, through passive hyperæmia or local anæmia, as may be relatively induced. Scholars both young and old, the overworked, the anæmic or the plethoric, may alike be attacked, as the brain or the medulla oblongata may suffer together or correlatively. In the young, paralysis and idiocy threaten as subsequent events. In the aged, dementia, mania, or imbecility, with creeping palsy, closes the scene of all useful life.

Both the centric and eccentric causes of epilepsy have been studied by various authors. Marshall Hall early taught that the convulsions of apoplexy and of epilepsy were due to the venous congestions resulting from the pressure on the large vessels by the cervical muscles. Kussmaul and Tenner, in their admirable essay, make issue with these doctrines, by experimentally inducing through compression of the great cerebral arteries an opposite state of the brain, by which an anæmic condition of the brain is induced, resulting in convulsions in every way resembling those of epilepsy. They consider that, by thus cutting off the supply of blood to the brain, and especially to the medulla oblongata, the active nutrition of these parts is interrupted, and thereby certain material changes ensue, productive of convulsions. On slicing away the cerebrum and the thalami, and then renewing the pressure on the arterial vessels, convulsions immediately occurred, thereby in-

dicating the medulla oblongata as the radiating centre. They conclude from their experiments that the central seat of epileptic convulsions is to be sought for in the excitable districts of the brain lying behind the thalami optici; and that anæmia of those parts of the brain situated before the crura cerebri, produce unconsciousness and paralysis in the human being. If spasms should occur with these symptoms, some portion of the excitable district behind the thalami optici must likewise have undergone some change; whilst anæmia of the spinal cord, instead of convulsions, produces paralysis of the limbs, of the muscles of the trunk, and of respiration. Although mere spinal anæmia does not induce epileptic convulsions, as insisted on by Kussmaul and Tenner, yet this impoverished vascular condition must not be confounded with traumatic lesions of the cord, as experimentally proved by Brown-Séquard, where the epileptic seizures could be produced by peripheric irritation of the integuments of the face and neck on the same side of the injury.

Although Marshall Hall's theory is incorrect respecting the compression on the venous trunks being the exciting cause of the convulsions, yet it cannot be denied that the reactive effect from this condition may serve to induce a more violent and rapid manifestation, and especially if the medulla oblongata had been in a previously irritable state. This differs, however, from laryngismus as an exciting cause; since, in this condition, the medulla oblongata is either primarily affected, or it is called into violent action by the exalted condition of the peripheric excitor nerves of the larynx itself. Hence the suffocative conditions vary according to the persistence or power of the irritative cause. In some, fatal tetanoid epilepsy results, from the fixed condition of the respiratory muscles, inducing complete asphyxia. In others, the cause is less persistent, and there is no fixing of the muscles of the chest. The spasms are more distinct in their alteration of tension and relaxation, whilst their subsidence corresponds with the carbonization in the pulmonary and cerebral vessels. The effect is much the same as produced by etherization; reflex muscular actions ensue at first, but subside during the advancement of the anæsthetic influence.

The exciting causes of these central or eccentric phenomena are very various, and the conditions of the nervous centres deviate from mere molecular perturbation to absolute disorder in their nutrition. The eccentric epileptic originations are more apt to be attended with the premonitory aura, consciousness being less speedily lost (and sometimes not all) than in an attack from cerebral or central causes.

When the result of wounds on the fingers, wrists, feet, limbs, &c., the aura not unfrequently attends, and the attack may sometimes be delayed or stopped by ligaturing tightly just above the point of irritation, by which either the perturbatory influences are checked, or a venous condition of the part is produced. When the result of mere internal irritations, many epileptics will, from instinct or from accidental discovery, throw themselves violently against some body, by which pressure can be made, thereby impeding the nervous perturbations, or inducing local venosity. That epileptic seizures, attended or not by laryngeal spasms, are apparently induced by mere nervous changes, independently of alteration of the calibre of the nutrient vessels, is verified by the mode which may at times be effectively pursued in arresting the epileptic attack that would have otherwise ensued. By calling imperatively to the patient to resist, and to make forced inspiratory efforts, the perturbations conveyed to the brain and medulla oblongata are neutralized by those caused by the exercise of the will, and the spasms do not ensue. Equilibrium is thus established. Some patients can in this way resist, by the exercise of strong voluntary impulse, the full effect of the attack.

That these points of irritation, no matter where seated, should cause epileptic phenomena, it is necessary that two conditions should be established. The first is, coincident disorder of the medulla oblongata, and of certain cerebral districts already mentioned. The second is, that these points of irritation should convey the impression to other organs or centres correlated in function or innervation, and from thence to the focal regions at the base of the cranium.

After all consciousness has departed, when all perception of sensation has ceased, the convulsions of epilepsy continue unabated or increase, from the exalted capacity of the medulla oblongata for reflex actions.

An important addition to our knowledge of the pathology of epilepsy has recently been made by Prof. Schröder Van der Kolk, who has verified, by his own minute dissections, the connections existing between the two sides of the medulla oblongata, whereby normal or morbid excitations of this part are distinguished by bilateral actions, thereby differing from the unilateral lesions of the spinal cord, and sometimes from the manifestations of injuries to the upper cerebral lobes. Hence, the early convulsions of epilepsy commence in bilateral movements of the face, tongue, and organs of respiration. The seat of these spasmodic actions lies in the ganglionic cells of the medulla oblongata, which, when irritated, excite the associated nervous filaments. The arterial supply of blood to these cells is even greater than

to the gray matter of the brain and of the spinal cord. The medulla oblongata becomes the focus of reflexion through the conducting fibres from the brain, from the spinal cord, and from the viscera and sexual organs, through the influence of the sympathetic on the spinal cord, through its nerves or its vascular reticulations. Although it may happen, in early epilepsy, that no appreciable organic change exists, yet, from the repeated congestions, an albuminous intercellular fluid is exuded, causing more or less induration, which may subsequently undergo softening or fatty degeneration. Dilatation of the arterial capillaries in the medulla oblongata, especially, has been found to accompany this state. These dilated vessels are found running chiefly in the region of the septum, corpora olivaria, and the roots of the hypoglossal and vagi nerves, the posterior half of the medulla oblongata appearing more hyperæmic than is normal.

A memorable distinction is drawn by Prof. Van der Kolk between those biting and those who do not bite their tongue. In the former, he usually discovered the capillary vessels wider in the corpora olivaria, and in the course of the hypoglossals; whilst in the latter, the vessels in the course of the vagi were dilated; and in these latter, from the greater disturbance of respiratory action, was induced a greater fatality during the fit. He also considers that epileptic dementia affords no proof of incurability, as it may result from the pressure exerted on the gray cerebral substance by the vascular distention, which may disappear after the cessation of the attacks. But it is different with the dementia following acute mania, as this depends on degeneration of the cortical substance, and is incurable. Attacks of unconsciousness, attended by little or no spasm, depress the mental powers more rapidly than attacks of convulsions without loss of consciousness.

Strong and unexpected impressions made on the senses have originated some of the most violent and irremediable epileptic attacks. Fear, grief, excessive joy, the immaterial influences from sudden or long-continued bright light upon the retina; of sound, and of mental conjurations, have produced every manifestation of the disease.

The traumatic causes of epilepsy, from injuries to the head, have been purposely omitted, as their consideration would occupy too much space for this paper. The only remark that I will venture here is, that these traumatic cases, as a general rule, partake more or less of the epileptiform character, and on post-mortem examination, the medulla oblongata and the irritable districts about the optic thalami are not found in the pathologic states as seen in uncomplicated epilepsy.

The relief that has been immediately and permanently gained by the surgical aid of the trephine or elevator, in some cases, also corroborates the statement, especially when these means have been employed before the mere functional derangement of the medulla oblongata has eventuated in its structural alteration.

The diagnosis of epilepsy from other convulsive disorders, implicating psychical or sensational manifestations, has been partially included in the delineations already made above, and will also be incidentally mentioned in the following portions of this paper, when speaking of treatment. The detection of spurious epilepsy affected by street impostors, or by army delinquents, criminals, and sympathy-craving individuals, can only be satisfactorily made by the scientific investigation of the subject, wherein the adoption of certain practical experiments on the reflex conditions of the nervous system afford the most reliable evidence, since they are unknown to, and beyond the control of, the suspected person. But even these reflex phenomena are to be carefully separated from the voluntary efforts of the experienced pretender, who either modifies by restraint or exaggerates by will the sought-for effects. In tetanoid epilepsy, where the muscular tension of the trunk and upper portion is very great, the dashing of cold water on the face or over the chest does not, at times, produce any noticeable reflex change, and the observer might wrongly conclude that the quivering or vibratory sustentation of the spasm was kept up by powerful voluntary act. I will also remark here, that sometimes this mode of treatment in these terrific cases may result in immediate relaxation, the nervous centres not being able to sustain the double action of the diseased exciting cause and of the peripheral excitation at the same time. But care is to be exercised, as cases have been reported in which the sudden dashing of cold water on the surface has proved almost immediately fatal, either by the sudden debility of the respiratory centres, or by their explosive increase of power, inducing an unyielding rigidity of the laryngeal and thoracic muscles.

As a general rule, however, the voluntary sustentation by the impostor is longer, provided he is surrounded by a wondering or sympathizing crowd, than the reflex spasmodic tension of the true patient. But it is well to remember that in both the same regional tracts are really brought into action—in one by voluntary engagement; but in the other by involuntary reflex action. The impostor has an object to attain: he selects a place suitable and somewhat comfortable for his imitations, and only accidentally endangers himself, and I believe

never bites his tongue; whilst the unfortunate epileptic falls anywhere, is unconscious of pain and danger, may bite his tongue, and evacuate the bowels or bladder, or vesiculæ seminales, and never runs away at the approach of any well-known medical man, who might, for experiment, light the clothes or straw on which he is lying.

A more difficult point of diagnosis lies in the interpretation of those cases wherein the incurrance of the disorder is unsuspected by the patient or his friends. Night-fits, especially, happen unnoticed by the sufferer, the sequelæ of which are complained of as original conditions, and may frequently be so treated by the medical attendant. Dullness of intellect, or irritability of temper, defective memory, stammering articulation, moral confusion, changes of habit and of affections, are frequently the early objects for professional consultation or observation, when the discovery is made, after a time, that the dread disorder of epilepsy had been latently existing, and had gained an impregnable foothold. Children, who sleep soundly, or others who sleep alone, may pass from slumber into epileptic sopor with rapid convulsion, and back into sleep again, without consciousness of the passage of the attack on waking, save a sensation of fatigue or of general malaise. Others merely notice a little blood on the pillow from the slightly-bitten tongue, but which is generally supposed to have come from the nose. Some cases of involuntary seminal emission, unattended, generally, by pleasurable dreams, are referrible to these latent epileptic manifestations. Our space forbids further attraction to these unsuspected cases of stealthy epilepsy, but enough has been said to render a more wary attention to many obscure cases of so-called ill health.

REMARKS ON TREATMENT.

From the antecedent portions of this paper, it must necessarily appear that as the causes and conditions leading to epilepsy are variable and very numerous, that no specific remedy or class of remedies can be relied on in regard to treatment, either as to eradication, or even amelioration. It has been shown that, although the paroxysms of epilepsy are generally exhibited by convulsions, or static disturbances of those parts receiving innervation from the medulla oblongata, either directly or indirectly, yet other phenomena besides those of muscular convulsions may ensue. In some, vertigo, with subsequent loss of consciousness, or with unconsciousness to every other condition, is substituted for the epileptic paroxysms, which appear merely to affect the larynx more or less, without implicating other special regional portions of the medulla oblongata. In some, indeed, the medulla ob-

longata, so far from being rendered excitable, seems to be temporarily paralyzed, and unable to sustain even the automatic actions so essential to life. Hence, in these cases, which appear to depend on some blood condition, either as regards its mechanical distribution from disease of the heart for instance, or its quality from some error of the organs of assimilation, the treatment must necessarily differ from those in whom no such condition exists, and in whom the phenomena vary. Epilepsy from disease of the basilar portions of the brain calls for a treatment differing from the attack induced by suppressed customary hæmorrhages, by abdominal tumors, or by reflected points of irritation in the genito-urinary organs, &c., &c. In one, epilepsy may result from causes purely nervous; in another, from disturbances purely vascular; whilst in a third, both nervous and vascular derangements may arise from a mechanical or accidental source.

Depravities of the blood, whether from kidney or liver disease, or other secernent impairments, are frequent causes of epilepsy. These depravities cannot be eliminated, or rendered innocuous, by mere treatment addressed to the local centre of radiation; it must be more comprehensive. The indications of blood-poisoning must necessarily be various; and this diversity depends mainly on the amount and quality retained, on the affinitive conditions of the different organs, and on the states of the nervous centres at the incursion of the blood pollution. The phenomena vary according to the various groupal connections, and the special derangements of nutrition. Poisons internally developed do not differ as regards their selective affinity and manifestation from those externally administered. Some are generated by excess of nutritive supply; others by its deficiency, independently of any fault in the organism. And this proportion of nutritive supply is as frequently relative to the organic capacity of the individual, as to the amount ingested. Some organisms produce, by a peculiar vito-chemical action from moderate sources, the very agents so injuriously reactive in those who have habitually abused their powers of assimilation by excess of supply. The lithic condition, for instance, resulting from organic generation in the former, represents a like state of non-transformation in the latter. It is seen in the gout of the starver, as well as of the feeder. So in rheumatism, where both the lithic and lactic poisoning are exhibited. In one, a mere affection of the non-epithelial fibrous structures ensues, resulting in general disorder from some known or traceable cause, as cold, damp, and exposure; whilst in another, the epithelial tissues become invaded, their disorder not being traceable to any undue exciting outer cause, but indicating a

blood-dyscrasia from depraved secernent actions, with constitutional results more or less threatening to life, as well as impedimentary to motion.*

In toxæmia, not only do the symptoms vary, but the causes of collection in the blood differ. Uræmia, with defective or contracted kidney, from which qualitative retention of noxious salts, or non-elimination of urea with urinary decrease ensues, is very different from the condition of the system by which the blood is surcharged with the same poisons, from their overgeneration, whilst the watery excretion is normal as to quantity, and its specific gravity higher as to qualitative extraction. In one, hydropical effusions ensue; in the other, emaciation with an ex-serous condition of the cellular tissue attends. Both may be convulsed, and the convulsions may be epileptic, apoplectic, or local, according to the portions invaded and the nature of the changes induced. If within the hemispheres, and the changes are those from congestion, apoplectic coma may result; if from mere irritation, the functions of the brain may be exalted into delirium or mania; if from depression of the nervous centres, stupor or lethargy may obtain. The convulsive actions or the paralytic inertness will depend on the reciprocative condition of the medulla oblongata, and the conductive or non-conductive irritability of the medullary matter. In many, the uræmic symptoms are not prominent as deviations in the intellectual or automatic portions of the brain. They may arise from the intermediate regions, viz., the emotional. Hence, cataleptic, ecstatic, euthanastic states are impressed, at times without and sometimes with convulsion, the flexor or extensor tension being frequently confined to one limb, or to certain muscles in groupal co-ordination.

Yet, as regards treatment, these toxæmic cases differ essentially, and hence the necessity for exactness of diagnosis. Since in one, a disorganized kidney may exist, from which there is no power of recuperation; whilst in another, the eliminative organs are sound, and performing extra duty. The cause of death in the first really lies in the kidney; whilst in the second, it lies in some portion of the nervous or cell system.

The epilepsy of the anæmiated from sexual abuses differs greatly from that of the plethoric, in whom the venereal function is restrained. In one is established an erethism, which responds violently to any cause invoking the function of the medulla oblongata; whilst in the

* See my article on Rheumatism of the Epithelial and Non-Epithelial Tissues, in this Journal, vol. viii., 1857.

other, the power is overgenerated, and explodes, so to say, as a spontaneous mode of relief. In females, the derangement of the uterovarian function forms a like condition. In both the male and female, epilepsy may be the result of a mere functional derangement, or it may ensue upon certain organic changes, which, whilst they are mostly irreparable, yet can be rendered less injuriously excitant through appropriate treatment. Epilepsy from erethism of the vascular nerves, by which the cerebral circulation is interfered with, resembles that excited through the changes induced in the vessels of the brain by disease of the heart. In one, the excitement of the vessels themselves is great; in the other, the vessels are mere carriers or holders, according to the cardiac condition, by which either more blood is forced into the brain, thereby exalting its nutrition, or, by overdistingending the chambers of the heart, a surcharged venoid condition is established, which depresses the nutritive energies, whilst the pressure is increased. The treatment required in the one case is opposite to that of the other.

In the epilepsies of children, especially when happening after the period of dentition, and in whom hereditariness cannot be traced, as regards either parents or grandparents having been subject to the disorder, it is imperatively necessary to inquire into any syphilitic disease having been incurred by the father or mother prior to the conception of these children. It is not uncommon to find eruptions, inguinal ulcerations, and follicular disease of the throat in the offspring of such parents, in whom no secondary affection has as yet manifested itself. The anti-syphilitic treatment relieves the condition of the child so afflicted, and is confirmatory of the origination, and as to the appearances of the parts affected. After a variable period, the parent may evidence the syphilitic taint by the various tegumentary eruptive disorders, or by nodes or cranial exostoses, or deep excavative ulceration of the glands and follicles of the posterior pharynx and larynx. As, in the parent, the affection yields according to the condition of the other organs, and of the local specific manifestation, to Hydrarg., bi-chlor.: Proto., iod. merc., or Pod. or Bromide potass., &c.; so, in the child, do the same remedies, judiciously administered, prove valuable in arresting the epileptic attacks.

In some cases of hysteria greatly resembling epilepsy, with uterine ulceration or erratic erosions of the cervix, I have been able in several cases to trace a syphilitic infection in the parent, and have, by cautiously administering the iodides and bromides of potash, &c., in conjunction with local treatment, been successful in removing the hysterical condition. The muscles which derive their nervous supply from

the medulla oblongata are, in the syphilitic cases of hysteria, brought into action more by the reflex irritation from the ulcerated or eroded portions of the posterior fauces, pharynx, and larynx, than by any specific central action. The cases are originally those of simple hysteria, aggravated by nervous conduction from the latent syphilitic conditions affecting the inner throat. They differ from cases of syphilitic epilepsy in these essential features: that in the latter, the primary inoculation of the virus originated in the individual, and not from an hereditary taint; that the syphilitic eventuations are elsewhere distinctly recognizable by nodal exostoses, alopecia, or eruptive, ulcerative conditions. The phenomena are also those of epilepsy, viz., the solitary cry, unconsciousness, insensitiveness, biting the tongue, disregard of danger, tetanic condition of the larynx, deficient respiration, turgid or blackened face from capillary rupture, involuntary passing of the bowels or bladder, &c., &c.; and are not those of hysteria happening in persons tainted through syphilitic parents. In these, the hysterical element is prominent, as exhibited in the repeated cries or sobs, emotional exclamations, unsubdued consciousness, watchfulness against injury of the tongue and person, globus, alternation of laughter and sobbing, and comparatively free respiration, with relaxed larynx, &c.

When the cranial bones, becoming affected by syphilis, give a fair ground of suspicion as to the cause of the epilepsy, the preparations of mercury, of iodine and mercury, iodide of potash, &c., conjoined with tonic remedies for the debilitated, will do more to effect a cure than any of the medicines vaunted as specifics. If the skull becomes thickened, independently of any venereal taint, and organic disease of the brain appears threatening from the various symptoms of paralysis, disturbed mental functions, neuralgic pains, &c., the long pericranial seton or issue should be resorted to, in conjunction with internal remedies. The neck seton, high up to the base of the skull, answers well in those cases where, besides an undue excitability of the medulla oblongata, there appears a hypertrophy or overgeneration of the ganglionic cells, by which a periodic discharge of nervous force is established. In some, the irritability appears at first to be increased; but, if the case be really suitable for the seton, this speedily diminishes as the suppuration increases.

In the anæmic, the seton fails of success. The drain is too exhausting, and local irritation is added to the nervous erethism. So far from becoming a point of divarication, it becomes a radiating cause of eccentric irritation. The ulterior effects, in such conditions of the system, are the same as happen in certain spinal diseases, in

which, besides the constitutional injury, a local exhaustive irritation is established by the worse than injudicious application of suppurative agents.

There are other cases, however, in which a suppurative drain relieves the fullness of the vessels, and appears as equally efficient for good as does the mechanical application, which relieves, in spinal disease, the crowding pressure of the vertebræ. When the blood is loaded with more or less impurity, a certain source of its elimination is established by opening a drain near the organ so greatly concerned in the phenomena of epilepsy. In local hypertrophy of the ganglionic cells, in which the amount of organic force and nutritive supply is in excess, a certain quantity will be expended in the wastage.

In some syphilitic tumors found pressing on or within the brain, the changes are seemingly effected in the same manner as when the ulna and tibial bones to all appearance become enlarged, as a result of syphilis. A fibrinous material is effused around the bone, and is attended with a hardness so great as to give rise to the idea of true ossific enlargement. The pain is tormenting, both night and day; and where the effusion is not great, or is so situated as to be covered by the muscles, and is detected with difficulty, the case is generally viewed as simply neuralgic. That the disorder is periosteal, and not a real increase of the bones, is readily discovered by the rapid subsidence of the enlargement under leeching, and the internal and external use of iodide of potassium. Such tumors I have seen emerging from the coverings of the brain, which is pressed on and progressively absorbed or condensed by the gradual encroachment. When examined, they are of a waxy, fibroid nature, without any appearance of cerebral texture. These tumors are indicated by the severe and continued neuralgic pains, the loss or exaggeration of function, either mental or motor, being subsequent to the physical or molecular alteration of the cerebral substance, which conduces either to the excitation or abnegation of power in the motor nerves below, since nutritive changes in the brain may eventuate in convulsive movements, as well as in paralysis. When such tumors are developed in situations by which the pons varolii is more or less encroached upon, neuralgia is a prominent symptom; the muscular symptoms being those of convulsion and paralysis, as referred to in the fore-part of this paper. Deafness in one or both ears, more or less varying, from time to time, as to the amount of hearing lost, is a not unfrequent attendant. The protoiodide of mercury and iodide of potassium are the sheet-anchors of treatment; whilst pustulation or a seton in the neck will act as a derivative, or as a source

for organic waste. As a matter of diagnosis in these cases, it must be remembered that the convulsions are not always epileptic; that is, they are not in the groupal muscles served by nerves from the medulla oblongata. They may merely affect the extremities, or one side only, without inducing general participation, whereby the larynx is more or less implicated. In place of convulsions, complete paraplegia, or of one leg, or hemiplegia, one-sided or crossed, may take place.

Epilepsy accompanied by nocturnal pains should always lead to the suspicion of syphilitic contamination. Iod. potassæ, with lactucarium, hyoscyamus, or conium, will be found most trustworthy.

In dilatation of the left ventricle, attended with thinning of the parietes and general cardiac asthenia, the nutrition of the brain is more or less interfered with, by the assimilation within its structures of the arterial blood to the venous. From such cardiac conditions, epilepsy is not an uncommon eventuation, and is frequently termed cerebral, when in reality it is the result of a disabled heart. In these states cure is impossible, but the treatment for temporary relief is at times practicable, although difficult to be decided on. When highly-carbonized blood circulates, or rather is delayed in the brain from such causes, it becomes highly important to know how long such a state can be safely borne, and if the spasms can be relaxed within a given time. Hence the propriety for the administration of chloroform depends on its power, in a certain case, to relax the spasmodic closure of the glottis, by which oxygenation may be re-established, or on its acting as a paralyzing agent over the peripheric and central respiratory functions. Without regard being paid to this latter contingency, the remedy at times so efficacious in the first condition would in the second become dangerous, by increasing the venoid stasis within the brain.

In the poor-blooded, debilitating passions are apt to be of more frequent occurrence than in the plethoric. As a general rule, they are more prone to voluntary and involuntary losses of semen; and if addicted to the saturating abuse of alcohol, opium, or tobacco, or if affected with anæmia, they are more liable to epilepsy than are those of more robust physical endowment. And the treatment in the one is less difficult than in the other, inasmuch as the organic constitution of the blood itself, in the rich-blooded, is not degraded, and does not require the additional medication for its reconstruction.

It is highly important to discriminate between the alterations of the brain-substance, inducing the epileptic attack, and the causes work-

ing such a deviation in the normal nutrition of the brain. The poison of syphilis in itself, for instance, does not excite the spasms, but the specific alterations of structural nutrition ensuing from its incubation induce the phenomena of the attack, which also in its turn may give rise to certain demonstrable local disorders, eventuating in an aggravation of the convulsions, or in a paralytic or maniacal condition, according to the situation. The treatment, therefore, in such cases, whilst it recognizes the proximate syphilitic entity, and is so directed as to destroy its specific action over the normal nutrition yet has to include such remedies as may possess the power of retarding the conduction for spasmodic action, and of reducing the quantity or quality of the fluids effused during the convulsive strainings. After the extinction of the syphilitic contamination, the normal type of the structures invaded may be reproduced, in preference to the abnormal modifications, which were renewed during the specific toxæmia.

The extra-cranial causes of epilepsy, such as cicatrices of the skin, or even of the cord itself, irritations from foreign bodies in the nerves, as from glass, thorns, needle-points, &c., or neuromas, or irritable districts in the mucous membrane, utero-ovarian derangements, &c., are to be searched for; and the knife, caustics, cathartics, emmenagogues, and the like, are to be resorted to. Both tardy and too profuse or frequent menstruation are sometimes premonitory exciting conditions: one by the hyperæmia and uneliminated material; the other by the nervo-vascular excitement and anæmia. The treatment in these states has to be specially directed; antiperiodic remedies, such as quinine, chinoidine, beberine, and arsenic being conjoined or employed externally with those addressed to the disordered function. And this disordered function has to be redressed, either by overcoming the local condition which imperils the general system, with epilepsy as its indication, or through the general system which effects the reactive derangement of special function.

In many cases there are no apparent conditions, as tubercles, or other morbid growths or alterations in the brain; but the proximate cause seems to lie in some derangement of the nervous centres themselves, which excites the paroxysms. Psychological changes, suddenly induced by fright, repelling sights, or imitative impressions, produce certain physical or molecular alterations of the central ganglionic cells, through which contraction or dilatation of the minute vessels ensue, giving rise to loss of consciousness, sensibility, and to convulsions. In the generality of such cases, the conditions are those of anæmia, and hence require the judicious selection of the preparations of

iron, zinc, and silver, combined with a nervo-stimulant or sedative, as valerianic, phosphoric, or hydrocyanic acid, in conjunction with a special tonic, as may be indicated. But remedial treatment is valueless, unless associated with rigid moral training. Exclusion from the special and all-exciting causes must be rigorously enforced, whilst the will of the patient should be perseveringly educated to oppose the effect of the sudden changes in the nervous centres, by instituting another and more powerful impression of resistance in the same centres or in others antagonistic to them. When glottal closure ensues, leading to almost complete suffocation, the application of a sol. of nit. arg., 40 to 60 grs. to the ounce, will be found of great benefit. If any warning is given before insensibility attends, the determined order by any one for the patient to take his breath, or the patient's self-determination, will produce most marked results. If there be much arterial throbbing, direct pressure should be made over the carotids, *avoiding compression of the jugular veins*. During the intervals between the attacks, air and non-exhaustive exercise, and the cautious use of the shower-bath, should be advised; the water being at first just below the temperature of the body, as otherwise the shock would induce a state similar to the one exciting the epileptic seizure. After a few trials, the temperature of the water can be gradually lowered. In conjunction with this, the patient must be subjected to self-moral training, the tonic remedies being cautiously administered. In the very fair-skinned, whose faces redden or pale easily by any emotional act, the preparations of iron, if given in even moderate doses, excite a certain erethism, which increases the susceptibility to every emotion to vascular changes from the increased nervous impressibility which is apt to be excited. Zinc and silver act more favorably; and as the appetite and capacity to bear food in greater quantities are generally increased by them, the blood recovers its normal composition. If it does not, then a grain of lactate or phosphate of iron can be mingled with the food, to be gradually increased as may be borne or required. The susceptibility of the mind must be changed by such studies, conversations, and employments of a sound practical nature as will tend to fortify the centres against emotional excitation.

In these cases is seen the same condition of the emotional tract as found in previously strong-minded persons who have suffered from depressing illness or from debilitating losses of blood, viz., the complete powerlessness of the intellectual centres, with uncontrolled action of the emotional. This happens not from any sudden access of strength in those portions presiding over these manifestations, but from the com-

plete inability of the reasoning powers to govern them. When this emotional erethism is fairly established, habit is engendered. In other words, the nutrition being changed from the normal condition to the anormal, the function becomes anormal instead of normal. Hence dreams, fanciful reveries, sudden emotional excitement, or even reflex impressions from touch during sleep, or absence of mind, may cause an attack of convulsions. Now these very cases, from the irritability of the basilar brain portions, are very apt to indulge in erratic feeling and actions, and to impair their general system by venereal excesses, or by secret vices. Hence, it may become essential to conjoin those remedies which apparently exercise a controlling power over the venereal functions, such as the infusion dulcamara, hyd. potass., camphor, bromide of potash, &c. But whilst directing attention to the fact of this condition, a warning is also to be inculcated, viz., to be certain that such erratic mania exists before administering any so-called anaphrodisiacs, since when absent (and in many, complete inappetency exists,) the very state suspected may be alarmingly excited, as known to me in several instances. It is readily comprehended from this fact, that no remedy is specific in regard to its phrodisiac virtue, this condition being a result of a relative physical state induced.

As a general rule, during the attack, even when practicable, the administration of narcotics is valueless, and such also is the result of their trial during the interval. But there are conditions in some cases in which the epileptic seizures are sequential to certain premonitory phenomena, that narcotics or anæsthetics prove valuable. In some neuralgia precedes the attack, and if this can be arrested, the convulsions are not excited. Hence both narcotic remedies or even local stimulants of rapid action, and anæsthetics are to be employed. I have known the application of diluted ess. ol. sinap. or Granville's lotion over the appropriate regions stave off a paroxysm, even when not premonished by neuralgia. By the reflected action from the surface on the centres, an impression (molecular change) is made, which is more powerful than the one from the disorder, independent of the peculiar nature of that change. But in central epilepsy, where the medulla oblongata is especially the radiating point, peripheric stimulation is injurious, inasmuch as its function is *overexcited, and thereby more blood is invited to it by the distal irritation*, and that blood being at the time poisoned, as regards the normal assimilation of that great centre. This effect of irritants applied to the surface is readily seen in hæmorrhagic effusion, from concussion especially, where the medulla oblongata or pons varolii is more or less impinged on by the pressure of the condensed

brain, whilst the vascular condition is proportionately increased. By applying mustard or ammonia, &c., to the extremities, reflex movements ensue, and frequently add to the mischief of the case by the exhaustion attending the violence of the motions.

Even injections of mucilaginous materials are responded to in these cases by spasms of some portion of the body, the manipulations necessary to their administration aiding not only in the excitement of the reflex movements, but also in fatiguing the patient. If the respiration be easy in the position assumed, *no attempt at movement of the head* should be made, as fatal consequences may suddenly ensue, as is so frequently seen in cases of fracture of the upper vertebræ. The bladder, in these cases of epileptiform convulsions from effusion of blood, (and sometimes even from serous collection,) is apt to become greatly distended; and although its expulsion is restricted, yet the distention is sometimes sufficient to arouse reflex spasms, whilst the ureters filling, the kidneys become irritated and congested by the reflux of their secretion. The bladder can in almost every case be felt enormously enlarged above the pubes, and the withdrawal of the water in these cases is all-important. But the bladder should not be suddenly emptied, as in some it acts almost as fatally as a blow upon the stomach, or after sudden evacuation of ventral fluid.

In all cases of epilepsy, it is important to inquire into the previous state of the urinary apparatus, since in many renal disorder is either an attendant or precursor; and where there is reason to suspect the forms of Bright's disease, or other conditions rendering the renal functions more or less inoperative, it is not to be forgotten that a large amount of animalized matter is thrown into the blood from the exhaustion of the tissues by the spasms themselves. In some a tetanoid affection is induced by toxic condition of the blood. Generally, peripheric irritation causes no reflex spasms in these cases. The tetanoid spasm arises from central poisoning of the portions chiefly deranged in the original attack. When the immediate spasmodic conditions have been subdued, the intervals may be occupied by an apparent rheumatic condition of the spinal region or of the extremities; but it is really a disordered membranous and neural nutrition from the poisoning of the blood, not only by the retention of urea, but of other animalized excretion, rendered unfit for further uses of the organism. The treatment by sudorifics, hot-air baths, proportionate exercise, regimen, and the *stimulation of the compensatory functions*, must be supplied from the hints already given.

Cutaneous repressions are in many cases followed by epileptic

exhibitions. Their appearance is not unfrequently significant of some irritation of the nervous centres themselves. This irritation may arise from toxæmia, induced by a derangement of elimination in some organ, by a plusage of supply to the blood from without, or by super-organic action of the secernent functions. At all events, the sudden suppression of the eruptions, by any topical treatment especially, is injurious and dangerous. The treatment must divide itself according to the constitutional condition. The cutaneous disorder is a mere topical product, frequently arising from a central disturbance, or from a blood condition interfering with the normal nutrition of the distal or of the peripheric portions, and is not an independent process through which the blood is contaminated, and the nutrition of the centres degraded. The direct treatment consists in endeavoring to reproduce the eruption which has been repelled, and in the employment of such sedatives or stimulants that may arrest, or restore if deficient, the central nervous irritability, and of such alteratives which may specifically change the blood composition and induce the normal status of the organs affected. The eczema of the habitually intemperate points as much to the disturbed central conditions of the cerebellum and medulla, as to the blood depravity from depraved secernent action. If the eruption is suddenly repelled in these inebriates, a fatal issue is not uncommonly induced or premonished by epileptic or epileptiform convulsions, with paralysis from cerebral causes. The hemiplegia of the drunkard, which causes the paralyzed arm to droop forward and to be apparently lengthened by the relaxation of the pectoral muscles, and the leg to drag the pointing toe wearily along the ground, is not only ushered in by convulsions, but is apt, if not fatal at first, to be attended with their constant returns; whilst uræmia, with its dropsical heart and chest, and puffy, tallowy face, or cholæmia, with its ascetic belly and shrunk, tawny skin, evidences the vast organic changes in the kidney or liver.

In all skin diseases with uræmic and cholæmic pollution, and even where no such conditions apparently attend, attention should be directed to the condition of innervation of the basilar portions of the skull. Causes which act on these portions, by which the circulation is impeded, are apt to induce congestions of the pulmonary vessels, attended more with the physical manifestations of transudation, than of exudation, which is an organic process. Hence hydrothorax and œdema, &c., are more frequent than pneumonia and pleurisy. In the inebriate a tardy decomposition of tissue attends the alcoholic absorption. In these the organic processes are more exhausted by their efforts of

transformation than of conformation, and these transformations are more of accommodation than of repair.

The term enteric epilepsy may be used in contradistinction to cerebral or central epilepsy. The radiating points are somewhere within the intestinal canal, the participation of the medulla oblongata or of the superior irritable districts being established by preceding irritability, or by some trophic irregularity. These points of reflex irritation may be in themselves direct lesions, or they may be established by abnormal growths, by worms, by acrid ingesta or secretions, &c. The remedial measures are to be selected according to their specific or alterative action: Nit. or oxide of silver, hydrocyanic acid, oxide, phosphate or valerianate of zinc, turpentine, croton oil, belladonna, opium, valerian, alterative prep. of mercury, of muriate of ammonia, &c. Sometimes an impacted gall-stone, by its reflex action, lies at the root of the epileptic evil, and the potash, opiate, and turpentine, and the sweet oil treatment, which insures the dislodgment of the biliary calculus, relieves the convulsive tendency. The same may ensue from the irritation by intestinal congestions, either crystalline or fæcal. The latter may be merely local, or the colon may become impacted in its distensive pouches, which may, however, allow the partial passage of fæcal matter, or even give rise, by frequent watery, slimy dejections, to the opinion of chronic diarrhœa. Together with eccoprotic measures, these latter cases are relieved by the injection of a sol. of bicarb. soda through the O'Beirne tube, which not only partially dissolves the accumulated masses and scybalæ, but induces a free discharge of bile from the liver. Epilepsies of this kind have arisen from the frequent and incautious use of charcoal and magnesia, which have collected in hard boluses, and tended to give supply for the formation of the magnesian concretions sometimes lodged in the intestines. It is in these enteric epilepsies that the internal administration of chloroform will be found so beneficial. Kidney complications have already been referred to, but independent of albumen, lithic conditions of decrease or increase, with or without renal calculi or sand, oxaluria, &c.; another condition of urine may exist which indicates not only uræmia, by which the centres are poisoned, but also a state of constitutional disassimilation or disintegration, by which the whole cerebro-spinal nervous system is exhausted. This condition is indicated by phosphatic urine, with deficiency of urea. Besides out-door exposure, which must not be accompanied by muscular fatigue, or by the indulgence of sexual excitement, (if the power be not already lost,) the nitro-muriatic acid bath, and its internal use, forms a valuable adjuvant. Where the exhaustion is great,

quinia, with phos. zinc., is indicated. As in this disorder the red blood-corpuscles rapidly diminish, and there exists a proportionate increase of the white, attended with defective respiration, an elegant and serviceable preparation will be found in the elix. calisaya et ferri phosphorat.

Albuminuria is not an unfrequent attendant in convulsive diseases; but mere albuminous urine should not be viewed as indicative of certain renal changes, since oftentimes it is found in urine having no deficiency of extractive salts, or of normal specific gravity. In many cases, the albuminuria is a condition of compensation. It mostly exists in undeveloped scrofulosis, and when the albumen is accidentally stopped or interfered with, its arrest becomes coincidental with tuberculous development elsewhere. And the same albuminuria of excess sometimes ensues in scrofulosis on arresting or healing up of old sores, the excess being compensative, and not destructive. These states result more frequently in scrofulosis of the syphilitic than where the taint is absent. The gauge for treatment depends on the quantitative analysis of the urine. If the extractive salts are normal in quantity, it will not be found safe to interfere with the albuminous contingent. Air and proportional exercise, and surface depuration, are the only remedies, unless syphilosis exists, the regimen being strictly followed that has been found to agree, by the patient's own experience, which affords the best mode of analysis. It will be only necessary to remember in case of violent convulsion in those states, epileptic or not, that the exhaustion following violent and long-continued exertions (voluntary or involuntary) are apt to induce cerebral congestion and effusion, with their sequential accompaniments.

In the trismus attending epilepsy, opiate enemata or local hypodermic injections are sometimes advisable, the latter being found most serviceable in enteric radiation. But locked-jaw in epilepsy may give place to the fixed open jaw. This result indicates no difference in the essential nature of the disease; it is merely a variation of groupal action. There is one distinguishing symptom as regards the jaw between hysteria and epilepsy. In the latter, the teeth never chatter.

The ancient Scots castrated their epileptics as a matter of cure; it has of late days been attempted, and sometimes successfully, when the eccentric cause laid in the testes; as a means of arresting its propagation in offspring, it certainly forms, when complete excision is made, a most effectual remedy. Some years ago, whilst in a city of another State, I was consulted by the owner of several whaling ships relative to a man about 32 years of age, who was regularly seized with epileptic mania when about thirty days out at sea. Learning that this

man when on shore was erotic to a great degree, and that otherwise he was well behaving and always enjoyed his health, excepting a severe pain in his left testis, I gave it a rough opinion, that the fits at sea, when apart from women, were probably owing to reflex irritation from the testicle upon the cerebellum and medulla. On his return from the voyage, during which he was constantly seized with epileptic convulsions, and violent but temporary mania, he heard of my opinion, and sought in a neighboring town the advice of a very skillful surgeon, who relieved him of the diseased testis. From that time to the time I last heard of him, about three years, he had enjoyed perfect health, without return of the symptoms. But in central epilepsy, with *subsequently* diseased testicle, no such favorable result could be predicted, unless the exalted sensibility of the testis propagated through its nervous relations fresh organic changes, attended with vascular dilatation in the medulla oblongata, thereby hypertrophizing the ganglionic cells, and rendering them more liable to surcharge.

As a rule in epilepsy, the torpid cannot be treated like the nervous and irritable; nor do remedies having control over the male act similarly over the female, since amenorrhœa, uterine ulceration, and leucorrhœa, or prolapsus and other displacements, affect the epileptic female in a special manner, the mere regulation of womb difficulties frequently insuring a cure.

From its peculiar action in diminishing the red blood-corpuscles, belladonna offers in the plethoric to form a valuable remedy, independently of its action over the sympathetic nerve, as also does digitalis in over-excitation of the heart, and especially when, from hypertrophic dilatation, the brain evidences a maniacal tendency. In anæmia with nervous erethism, inducing frequent, short attacks of epilepsy, the hydrocyanate of iron, steadily persisted in, induces the return of red corpuscles, whilst the nervous susceptibility is kept soothed. By many of the older practitioners indigo was esteemed as almost specific in the treatment of epilepsy. It acts more favorably on females, in whom some uterine derangement exists with the epilepsy.

Both the oxide and phosphate of zinc are valuable alterative tonics; their employment is indicated in the anæmic and brain-wearied. In the plethoric they do not serve well. The valerianate of atropia has been recommended by high authority, in the dose of 120th of a grain. Atropine by injection has also been recommended; as yet, I cannot offer an opinion as to their adaptability, but should not recommend their use in the anæmiated, or those with heart complications. If given to the rather plethoric, and the fits are reduced considerably in interval,

one caution must be observed, lest an accumulation of force through apparent hypertrophy of the ganglionic cells should ensue, and prove fatal by the violence of the convulsions. Where this is dreaded, the seton should be employed as an exhaustive drain, and such exercise continuously but moderately enjoined as will tend to discharge a certain amount of power.

In conclusion, I will state that in eccentric epilepsy, where the glottal spasm is one of the first symptoms, I have been satisfied with the results of the application of the sol. nit. silver to the larynx, followed by a solution in glycerine of quinia as a local antiperiodic, and with the rubbing in of a strong sol. quinia in the spine after the irritation, by ess. ol. sinapis dilut. Arsenical solution, internally administered, (and sometimes by injection per rectum, in a mucilaginous vehicle,) is also restrictive of the periodicity of the attacks. Arsenic appears to act through the peculiar influence it exercises over the rapid arrest of the albuminous tissues, and probably through its power of constricting the capillaries and minute arterial terminals. This influence is sometimes exercised over the matrix supply of the nails, which have been known to drop off during its long or over use.

The results of the trials known to me of the cotyledon umbilicus have not been favorable as to the arrest of epilepsy; yet, when scientific are forced to yield to empirical indications of treatment, it may be tried.

Ice to the upper spine and back of the head I have found useful in controlling the violence of the fits; as a cure, it is inapplicable. Tracheotomy is a last resort, whilst scarifications of the internal larynx during the interval may relieve the tendency to engorgement, œdema, and reflex irritability. Powerful stimulants, as ammonia and ess. ol. sinap. dilut., to the spine, in proper eccentric cases, induce such changes in the centres as render them inoperative to the changes effected by the disease, or attracts to superficial expenditure.

Transactions of the Medical Society of the County of Kings.

REGULAR MEETING, AUGUST, 1860.

Case of Malformation and Malposition of the Kidneys—Death from Bright's Disease, Abscess in the Kidney, and Pericarditis. Reported by Dr. TURNER.

W. T., a German, aged 32, employed in the Kings County Hospital, applied to me to prescribe for him about the 1st of February last.

He complained of severe paroxysms, of pain in the hypogastric region, nausea, diarrhoea, and difficulty in micturition. There was tenderness on pressure in the median line between the umbilicus and the pubes, the tenderness extending into the right iliac region.

From the fact that the patient's bowels had been constipated for some time previous in connection with the fullness and tenderness present in the region of the cœcum, I looked upon the case as one of slight enteritis, probably induced by fæcal accumulation, and treated it accordingly.

In a few days he was up and attending to his business, but was soon seized with another attack of colic, more severe than the first; this soon yielded to treatment by anodynes and warm applications to the abdomen. This attack confined him to his room for two or three weeks, after which he continued his occupation, but still remained debilitated; complained of irregular appetite and constant thirst, and he noticed that he passed a much larger quantity of urine, especially at night.

About the middle of July his face and legs became cedematous, and he had diarrhoea and vomiting occasionally. It was discovered at this time that his urine was highly albuminous.

He commenced to suffer from pains in the chest during the first week in August.

These slight pains finally settled into severe pain in the cardiac region, accompanied by paroxysms of dyspnœa. These symptoms were relieved by sinapisms, but continued to recur up to the time of his death, on the 13th of August.

Two days previous to his death, his urine was examined and found to be very albuminous, and the microscope showed that it contained a considerable amount of pus corpuscles.

It is worth mentioning, as an important negative symptom in this case, that the patient had no pain in the back at any time during the course of his disease.

The autopsy was made thirty hours after death. The lungs were congested in their lower lobes and posterior portions, and were cedematous throughout their whole extent; otherwise they appeared normal.

The pericardium was attached to the heart by recent adhesions of soft, easily detached lymph.

The liver was large, and on its exterior surface, beneath the serous coat, were numerous cysts, varying in size from the head of a pin to the size of a pea.

The mucous coat of the stomach was of a reddish-gray color, and

several circular spots about one-half an inch in diameter were observed in the course of the greater curvature.

The kidneys were absent from their natural position; but resting on the third and fourth lumbar vertebræ, and immediately over the bifurcation of the aorta, was one kidney formed by the congenital fusion of the two together.

This abnormal kidney measures five inches across, three inches from its upper to its lower edge, and is about one inch in thickness.

Its anterior surface shows a division into three nearly equally-sized parts, the left third being again subdivided into four lobes.

The ureters are given off from the anterior surface, and are only about one-third their usual length, (16 to 18 inches.) The left is six inches long, leaves the kidney by two branches about one inch in length, one branch coming from the upper, the other from the lower border of the organ. The ureter on the right side is five inches long, and is not branched like the left.

The posterior surface of the kidney is not lobulated like the anterior, and it has more the appearance of two kidneys joined.

The cortical structure, when stripped of its investing coat, had the rough appearance peculiar to chronic degenerative disease of the kidney. When cut into, it looked fatty; and examined under the microscope, oil globules were seen in abundance.

On the right side, posteriorly, was found an abscess in the cortical structure, containing half an ounce of thick, greenish-colored pus. No communication was perceived between this abscess and the renal pelvis.

The supra-renal capsules were found in their natural position, were of usual size, and normal appearance.

Cold—A Cause of Miscarriage. By DR. GEO. J. BENNET.

The frequent occurrence of abortion or miscarriage, with the consequences often of ill health and injured constitution that follow, and the calamity that many consider it to be, make it a subject of great interest to the practicing physician, and a word said, or a thought suggested as to its cause and prevention, may be admissible, although much has been said and written on the subject. But it seems to the writer, that among the many causes named, the principal *one*, or that one which more than any other determines miscarriage, has been mostly overlooked, or only slightly alluded to in the works that he has consulted in reference to this matter; nor do I recollect of my

preceptor, for whose teaching in midwifery I still entertain the highest regard, giving it any important place in his instructions.

The determining cause of a majority of the cases of abortion or miscarriage that I have been called to treat, seem to me to have been brought on by just taking cold. *An ordinary cold, with the derangements of health attending it*, to my mind, more frequently than all other causes together, determines this unfortunate occurrence.

In taking cold, we constantly have congestion of one or more organs of the body, in greater or less degree.

Certain organs, much oppressed by the congestive state, find relief in hæmorrhage, as sometimes, fortunately, the *brain* is relieved by *epistaxis*, the *lungs* by *hæmoptysis*, &c., &c. Now the impregnated uterus, for certain reasons, has much more hæmorrhagic tendency than any other organ of the body.

First, its central position between two of the most important emunctories of the system, any inordinate action or oppression of which may involve coincident inordinate action of this organ.

Next may be remembered the well-known (but little understood) nature of the womb, as the focal centre of all sympathetic action of the highly susceptible female organization. The passions, impulses, excitements, violent emotions, all those electrical workings of woman's impressible and emotional nature, griefs and fears as well, all find their intensity of action culminating in the womb. From all these greatly varied sources, premature action of the organ, with hæmorrhage, may be induced.

In the third place, of the most important reasons why the uterus, more than any other organ, is liable to hæmorrhage, will be remembered its condition of *congestion*. For we are always to look upon the womb, when bearing its fruit, as being in a state of congestion; but this congestion, as natural, *physiological*, consistent with the most perfect health; still *being* in this *congested state*, it is eminently liable, from sufficient cause, to receive such additional afflux of blood as to change it rapidly from *physiological* to *pathological* congestion, and hæmorrhage, with threatened miscarriage, follow.

Closely connected with this view is one of the causes of miscarriage named by authors, and recognized as such, viz., the death of the fœtus. Now, the death of the fœtus comes in for its share in the causes of premature labor; but we may, in most of these cases, inquire, What caused the death of the fœtus? and reply, A change of the physiological congestion of the uterus to pathological, causing separation of

the placenta, hæmorrhage, internal or external, and death of the fœtus.

Although there is a fearful array of causes hinted at, or named above, and others could be cited, the consideration of which might be regarded as important; still, the object of this is not to review *all* the causes of miscarriage, but to call attention to *that one* which the writer considers the most important, or most frequently superinducing this disaster.

It might be asked here, if all this array of causes was not enough to conflict the opinion given above, viz., that "taking cold determines miscarriage more than all other causes;" and the answer would be, the results of many years' experience lead me to say, that all these do not furnish sufficient reason to recede from this proposition.

A word must be permitted as to the circumstances under which we take cold. I think we seldom take cold of any severity, without that condition of ill health being preceded by other derangements, such as we understand by the terms constipation, bilious condition, congestion of the portal circulation, disordered state of the stomach and bowels, &c., &c. In the derangements of health indicated by these terms, the power of resisting atmospheric changes or influences is reduced, and we are rendered liable by just so much to fall under the influence of cold, or in common language, "take cold," and then may follow, in the cases under consideration, the consequences alluded to above.

This prepares the way for me to bring forward the few things I may venture to say or suggest as to treatment.

Undoubtedly, we all propose to arrest threatened miscarriage, and save the patient from the calamity, if it has not advanced too far; how far it may proceed and yet be arrested, I may not stop to inquire, although I should be pleased to, for I fear this trouble is sometimes permitted to go by "default," when it might have been successfully treated, the fœtus saved from destruction, and a mother's fond hope realized; but this question does not belong to the one under consideration.

We shall certainly secure success in cases not too far advanced, just in proportion to our fortunate adjustment of treatment to the provoking cause.

The value of theories in medicine is to be estimated by the practical advantages they yield.

In my early practice, following in the best manner I could the instructions received during student life, I gave opiates, astringents,

anti-hæmorrhagics, &c., &c., when called to cases of threatened miscarriage with even moderate hæmorrhage; and I made some patients who were only slightly ill, very sick with my treatment; and it has fallen in my way to meet some cases in the hands of older practitioners than myself, who treated similar conditions in similar manner, with the same undesirable results—of course, long ago.

I have often had occasion to be thankful for the happy results that have followed the use of such remedies where they were needed, but I constantly feel that their use must be avoided as the *first* medicines, unless the hæmorrhage is quite profuse.

In cases of threatened miscarriage with any considerable amount of hæmorrhage, we must use the *most efficient remedies to restrain the flow of blood first, whatever the cause may be*. The patient must be saved from fatal hæmorrhage, and the *cause* attended to then, and afterwards, as circumstances will best admit. But if, as most of the cases coming to us turn out, there should be but slight or moderate hæmorrhage, the best way to prevent its becoming free or alarming, is to address ourselves to the *cause*; and if *this* is found to be derangements of the digestive apparatus, and cold taken upon these conditions, as it so commonly happens, while we provide our patient with opiate and astringent treatment, and all such means and appliances as are necessary to restrain profuse hæmorrhage, to be employed if required, we shall find *mild laxative and alterative treatment*, often to be combined with the *febrifuge* and *opiate*, the most appropriate.

Mild laxatives, such as syr. of rhubarb and castor oil, of each ℥ss.; syr. rhubarb and cream-tartar; cream-tartar alone; sometimes blue pill and rhubarb; and even in some cases, a fair dose of calomel and jalap. With any of these may be associated an opiate, such as may be indicated by the accompanying pains.

The occasion for the use of alteratives nearly always exists, and they are to be employed on the same plan as we use them when similar derangements of health find other and widely different ways of manifesting themselves.

Ipecac with nitratis potassæ, where there is febrile excitement, often proves an invaluable agent, acting in these cases as an anti-hæmorrhagic, antispasmodic, and an equalizer of the circulation. Venesection *used* to be frequently employed, and with good success too, from the very considerations that I have presented here, viz., the physiological congestion of the uterus having suddenly merged into pathological, which venesection, with other suitable remedies, is well calcu-

lated to relieve. Although I believe of late it is seldom practiced, or necessary.

I cannot claim to have succeeded to my satisfaction, in bringing out this, to my mind, important matter; but I must indulge the hope that the few things I have offered may serve to call attention to the fact, that falling under the influence of cold, or as we commonly have it, "taking cold," is more frequently a superinducing cause of abortion or miscarriage than any other or all other causes; and that addressing our remedial agents to these conditions, as well as the collateral circumstances, will be found in the sick room and in the time of danger the plan of treatment; no matter what speculations we may indulge, or theories we may be partial to in other places, that will stand by and sustain the physician, who judiciously practices upon it, and in the best manner avert threatened calamity, and rescue the patient from her peril.

A Case of Enormous Sloughing Ulcers produced by Mustard. Reported by DR. JOHN G. JOHNSON.

On Friday, August 3d, a puny emaciated child, with a dull, sunken eye, was presented at my service at the Long Island College Hospital, with the following history. The child at birth was strong and healthy. The parents were both healthy. The mother had rapidly recovered from her confinement without any drawbacks, having a full supply of milk.

The child grew rapidly and vigorously until it was six weeks old, when one evening the mother gave it three drops of laudanum for the colic. The laudanum had been procured a few days previously at a respectable druggist's it was perfectly clear, and it is presumable was of the strength of the U. S. Ph. The three drops produced profound narcotism.

A neighboring physician was called in, and among other things, directed sinapisms to the abdomen, and to the calves of the legs. No specific directions appear to have been given in regard to the manner of preparing, the mode of applying, or the length of time the mustard should be left on; as the pure mustard was mixed with water, and applied directly to the skin, with nothing interposed. The mustard remained on, as nearly as could be ascertained, about one hour. The mustard plasters were merely removed, without washing the limbs afterwards. At the time the mustard was removed the skin was reddened only. The next day the midwife directed linseed meal poultices to the limbs, as they had commenced to mortify.

The child had no medical treatment for the next four weeks, until it was brought to the Long Island College Hospital in such a condition of extreme exhaustion, that no one thought it could live for more than a day or two. There had been a complete slough of both calves. The right one, extending from an inch above the condyle of the femur to the tendo achilles, occupying the posterior two-thirds of the limb. The left one from the popliteal line to the tendo achilles and the posterior half of the leg. The whole of the integument, areolar tissue and muscle had been completely destroyed, leaving the tibia and fibula merely covered by the periosteum. The edges of these ulcers were elevated and everted. There were no granulations, the whole base being of a dirty gray color. On the mons veneris there was a deeply excavated ulcer, which had destroyed nearly the whole mons. On the nates there was another of the same character. These had apparently been produced by mustard, having dropped on those parts and being left.

The case was seen by Prof Hamilton, and Drs. Davol, Hallet and Clark, all of whom regarded it as a hopeless case. More for the sake of doing something than with the expectation of a cure, I directed half a tea-spoonful of cod-liver oil three times a day; the ulcers to be kept moistened with an infusion of poppies, and the child to be kept on the ferry-boats two or three hours a day; that the mother should take ale with her meals at least once every day, and if the child should seem to grow weaker, to give it a few drops of brandy and water occasionally. The next day the child appeared to have rallied; the treatment was continued, except the poppy fomentation was changed for the application of ung. zinci. oxid; 1 part to 7 of axungia.

Aug. 15th.—The child is much stronger than a week ago; the edges of the ulcers are flattening, and red granulations are springing up; the ulcer of the mons veneris looks quite healthy. Treatment is continued; in addition, the child is to be bathed with warm New England Rum and water every day.

Aug. 17th.—The ulcer on the mons has nearly healed; that on the nates looks much better; there are healthy granulations all over those on the legs, and they are commencing to cicatrize at the edges.

Aug. 27.—The ulcer on the mons is completely cicatrized; there is left a deep excavation; the ulcers on the legs are nearly cicatrized; the feet, which had been drawn up by the action of the flexors, are now contracted by the cicatrices.

Sept. 6th.—The ulcers are completely healed, with firm cicatrices; discharged; cured. The cicatrices are depressed much below the level

of the surrounding integument. The recovery of the child was a result which no one anticipated who saw her at the time she was first brought to the hospital. When I was a student with Dr. James R. Wood, a little child was brought to his office with a large slough of the right side, produced by a blister applied to the chest by a dispensary physician for pneumonia; several of the ribs were exposed.

Cases like these almost justify the conclusion of Dr. West—to abandon almost entirely the use of blisters and sinapisms in the treatment of young subjects.

Beck, in his *infant Therapeutics*, relates the case of death from the application of mustard. Pereira mentions that he has seen two instances of death from the gangrene caused by the applying of blisters after measles. Prof. Dunglison has also seen several cases of death produced by the use of blisters in scarlatina and measles. A moment's consideration will show that the general rule of applying a blister for so many hours cannot be a safe rule. There is such a difference in the susceptibility of the skin in different subjects, and even in the same patient, in different parts of the body. Thus, West says, "The skin on the front of the chest is peculiarly delicate, and a blister applied there for two hours would almost certainly vesicate, while it might not produce the same effect in double the time if applied beneath the scapula."

In cases of great constitutional prostration or emaciation, the risk is great, as is shown in the above cases; there being so little vitality, a slough may follow what would be considered a short application; and one objection advanced by Dr. West is by no means a slight one. He says: "The constitutional disturbance which they produce, the pain while they are drawing, the soreness of the surface while they are being dressed, and the itching and irritation which accompany their healing, often keep up an amount of restlessness and feverish irritation that are in every way prejudicial to the child's recovery."

If, however, it is determined to apply a blister, it should be applied for a short time, and then the edge should be raised to see if it has commenced to redden; as soon as the skin is reddened, the blister should be removed, the skin carefully bathed, and a poultice applied; the blister will almost invariably raise with the application of the poultice with far more safety to the little patient, than if the blister had been kept on for any prescribed number of hours. A single word as to the use of laudanum. Beck mentions the death of an infant from a single drop of blood. In the *London Medical Gazette* for Nov. 6, 1846, there is an account of the trial of a nurse, for causing the death of a child 5 days old, by the administration of two drops of laudanum. In

this case, 3 drops nearly cost a child of six weeks its life. It is such a potent agent that it should not be used in the treatment of infants without judicious medical advice.

Dr. MITCHELL reported a case of injury to a child *æt.* 5, by the falling of a bundle of hides from the third story of a storehouse, on the child's head. When first called, he found the child with a sunken countenance, pale, cold skin, almost pulseless, and bleeding from left ear. After administering a little brandy and water, there was moderate reaction, and he then complained of violent pain in the left groin, then in the thigh, and of having a tired feeling in the leg, all of the left side. These pains came in paroxysms, and were very violent; there was no tenderness on pressure. Next day the pains and tired feelings continued, but at longer intervals.

Enjoined perfect quietude, and administered a little castor oil. After four or five days permitted him to set up awhile. The pains have gradually subsided, and now, nine days from the time of injury, he appears pretty well; seems disinclined to try to walk, but crawls about on his hands and knees. Has no pain, but says his leg is "asleep." In answer to an inquiry from Dr. Mitchell as to the value of bleeding from the ear as a symptom, Dr. Enos remarked, that bleeding from the ear should, he thought, always be regarded as a grave symptom in injuries of the head; but if the bleeding was unaccompanied by serum, he did not regard the symptom as absolute evidence of a fracture at the base of the skull. When the bleeding was accompanied by the discharge of serum, he looked upon it as positive evidence of fracture at the base of the skull, and he knew of no such case that did not terminate fatally.

Dr. BELL referred to a case which occurred in his practice about a year ago, of a man who received an injury of the skull, followed by bleeding from the ear, succeeded the day after by a serous discharge. This case was followed by no active reaction; the man complained of dizziness on attempting the upright position, and was therefore easily kept to the semi-recumbent position which was enjoined. His bowels were moved by a small dose of calomel, and at the end of the tenth day he was well enough to walk about the house, up and down stairs. Cautioning him against sudden movements, or any more active exercise than walking about the house, for at least one week longer, visits were discontinued with that understanding. On calling at the expected time, was informed at the door that the man was dying. He had wilfully gone out the next day after my last visit, was caught out in a drenching rain, got home very tired, and was taken with chill, fol-

lowed by what the physician who was called in pronounced, *congestive bilious remittent fever*, of which he died on the sixth day, sixteen days after the injury. The physician subsequently became satisfied that he died of compression of the brain, caused by fracture at the base of the skull; the man was comatose from the beginning of the fever; had no convulsions. The doctor was deceived by not having a history of the case.

Dr. ENOS reported a case of fracture of the skull, *os frontis*, with depression, for which, though there were no symptoms of compression, the patient was trephined. The inner table was found to have sustained, what is by no means unusual in such cases, a more extensive fracture of the inner than of the outer table of the skull. The bone was raised, and the patient at first appeared to do well. Yet after a few days, he seemed to have slight fever, which produced a good deal of prostration, though without urgent symptoms; and at the end of about a week he died, being unconscious only about twelve hours before his death.

On post-mortem, the whole circumference of the brain was covered with pus, showing that an unusually active inflammation of the membranes, resulting in suppuration, had taken place without other symptoms than such as usually characterize a febrile state. This case, he thought, was in one respect similar to Dr. Bell's, likely to have been mistaken by any one unacquainted with the history of it.

Of epidemiological diseases, Dr. MARVIN reported two cases of children, one nine months old, and the other between three and four years, with decided cholera symptoms. The younger one died within twelve hours; the elder recovered. There was in these cases well-marked collapse, with rice-water discharges. They both occurred early in the summer.

He had had quite a number of cases of infantile diarrhœa, and some dysentery, but altogether less than usual for the season of the year, and the cases kindly yielded to treatment.

Dr. MITCHELL's experience accorded with Dr. Marvin, in the unusual healthiness of the season. He had had no such cases as the two reported by Dr. Marvin with cholera symptoms; on the contrary, he had noticed that the diarrhœa cases in his practice were rather of mucous character.

Dr. MULHALLON had had more or less scarlatina all summer, but the cases were mild. He had not seen so much of this disease in the summer heretofore.

Dr. BELL reported a family of a mother and three children affected with diphtheria of unusual malignity. The first case, the eldest child,

aged 4 years, was taken on the 4th of August. The doctor was called to see it next day; found the child's jaws stiff from the acute and extensive inflammation of the parotid and submaxillary glands; fauces, nares, and cheeks completely lined by diphtheritic membrane, causing great dyspnœa; skin burning hot; pulse 160; tongue protruded with difficulty; also thickly coated with exuded membrane. Ordered frequent ablutions with lukewarm water, and exposure to the air; and for diet, thin sago gruel with wine, and to give wine a little at a time, frequently diluted with a saturated solution of chlorate of potash. On the fourth day the nose began discharging, and for the next three days discharged profusely; the membranes of mouth and fauces also softened about the same time, and was thrown off in large quantities for several days. The child was then able to take meat soup, and enjoy the wine a little sweetened. Citrate of iron and quinine was given, $2\frac{1}{2}$ grains thrice daily.

On the fourteenth day, considering him well enough, directed that he be taken out and aired in the ferry-boat. While out, he was taken with convulsions; was called soon after, and by the use of ordinary means the convulsions ceased. On the third day afterwards convalescence seemed to be again established. The tonic treatment was continued.

On the 24th, 20 days from beginning of the disease, he was brought to my office *with dropsy*, face puffy; limbs anasarcaous; abdomen prominent. Added to his treatment, ol. juniperi gtt. iij., thrice daily, and loins to be rubbed with dilut. ol. tigllii. Was unable to collect any of his urine for examination, but from appearance on bedding it was evidently scant. In the course of ten days he passed his urine freely; swelling rapidly disappeared, and he seems now on the right road to health.

The second case, æt. 3, was taken on the 10th, and the 3d, æt. 15 mos., on the 13th. Each of these died on the fourth day of the disease, before the membrane sphacelated. In one of them, on the second day, there was a petechial eruption about the neck and abdomen. The mother also had the disease, but in her case it was more adynamic. She recovered under good diet and stimulating tonics. This family lived on the garret floor of a tenement house, 331 Columbia Street. The yard and cellar of the house contains a large mass of decomposing material. The whole neighborhood is in a filthy state.

Case of Hydrothorax. By DR. ENOS.

Robert S., a boy eight years old, not usually very robust, having

rather a flaccid constitution, I was called to see on the 17th of September last. He had just returned from the country, where he had spent the summer; had not complained of pain, but for the last few days had not played with his usual eagerness, and he would stop for breath in going up stairs; still he was out every day, but he tired easily. No pain and no cough to attract attention; his pulse now, when quiescent, was 120, and the respiration 28.

On examining the uncovered chest, an unusual fullness was observed on the left side, and it measured one inch more than the right. The intercostal spaces were obliterated, and the apex of the heart was seen and felt beating in the median line. There was complete dullness or flatness on percussion throughout the entire extent of the left pleural cavity, from the apex above the clavicle, down to the diaphragm. Bronchial respiration heard in the region of the middle lobe; and in that of the inferior, faint but distinct respiratory murmur was heard, growing weaker as the ear was passed along from the spine, forwards over the affected side towards the median line in front. This was doubtless transmitted from the sound lung, whose normal sounds have been intensified by increased labor. The bowels were regular; the stools of a yellow color; urine a little less than normal in quantity, but not albuminous; appetite fair; ordered iod. pot., and mint. water and also cream.

Oct. 1st.—Rests better at night; pulse 100, and respiration 24; has been taking regularly gr. v. of iod. pot. in a drachm of mint water thrice daily, and also half pint of cream in the course of the day with his food. When the weather was mild he was allowed to walk out. A small blister had been applied to the chest, which worked kindly at first, but as there was a tendency to ulceration and suppuration, it was not repeated. At this date the lung was clear and resonant to the lower angle of the scapula; apex of the heart $1\frac{1}{2}$ inch to the left of the median line; urine more free.

Oct. 15th.—Serum nearly all gone; lung fills the chest well; heart nearly in its normal position; the medicine has been continued, with an interruption now and then of a day or two; the half pint of cream and good food have been taken daily; he sleeps quietly, and has a normal pulse and respiration. Prof. Hamilton saw this case with me, and concurred in diagnosis and treatment.

MONTHLY SUMMARY OF FOREIGN MEDICAL LITERATURE.

By DR. L. ELSBERG.

32. *How to Prevent the Disagreeable Vomiting, after Inhalation of Chloroform.* By Dr. R. FISCHER. (Wiener Allgem. Med. Zeitung, 26, 1860.)
33. *The Alterations of the Tongue in Diseases.* By Dr. CARL NEIDHARDT. (Archiv für Wissenschaftliche Heilkunde, V., p. 294-318; Schmidt's Jahrbücher, March, 1861, p. 338.)
34. *On the Treatment of Neuralgia.* By Dr. SIEVING. (London Lancet, Feb. 2, 1861.)
35. *On the Physiological and Therapeutical Properties of the Peroxide of Hydrogen.* By Drs. RICHARDSON, THUDICUM, LANKESTER, etc. (Transactions of the Medical Society of London, 1861.)

32. According to Dr. Fischer, a glass of wine taken 15-30 minutes before chloroform, will entirely prevent the vomiting so often troublesome after inhalation. Perhaps, he adds, the dangers may also be lessened by this simple means. [We feel bound to confirm Dr. F.'s positive statement to some extent, having frequently with great benefit administered wine before producing anæsthesia. The desired effect seemed in all cases to be produced more quickly and safely, (*i. e.*, with a smaller quantity of the anæsthetic,) and though we had not directed special attention to the vomiting afterwards, we do not remember that it ensued in a single one of these cases. Our experience in this respect is further borne out by that of a friend, a dentist, of this city. L. E.]

33. Omitting other abnormal conditions of the tongue, Dr. Neidhardt arranges his remarks under three heads of coating, smoothness, and dryness.

a. *Abnormal coatings* depend essentially upon a prolongation, loosening, and discoloration of the epithelial processes (*cilia, appendicæ epitheliæ*) of the papillæ. Whether a catarrhal condition is its cause, seems questionable; at least the places on the tongue free from coating show no hyperæmia. Certain it is that disordered nutrition occurs extraordinarily easy in the epithelium of the tongue. As to the *extent* of the coating, it is either total or partial; in the latter case it is either symmetrical, *i. e.*, covers corresponding portions of the tongue, or is unequal, sometimes entirely on one side. This, as well as the coating of the tongue in health, is owing to the motions of the tongue, and the friction it sustains. Thus the coating is found on only one-half of the tongue in cases of paralysis of one side of the tongue, as also in cases of one-sided neuralgia trigemini. The symmetry of the coating often depends entirely on the form of the tongue, as *f. i.* in the conical; while unsym-

metrical, partial coating, may be owing to accidental circumstances, as want of a tooth, projecting teeth, &c.

As variable as the extent, is also the amount or *thickness* of the coating. It also depends mechanically on the use and friction of the tongue, and is not proportionate to its roughness.

The *color* is at first grayish-white. It is changed from substances introduced from without, or from such as come from the body itself. Among the first, articles of food and medicines, as well as atmospherical dust, must be taken into consideration, besides special coloring matters. The discolorations from the body may arise from blood or biliary coloring matter. Blood extravasates on the mucous membrane of the tongue almost only in very severe diseases, when, in consequence of extreme dryness, fissures and rupture of superficial capillaries occur. The color may vary from reddish to black, constituting the rusty coating. The yellow coloration does not seem to be produced by biliary coloring matter, as is generally supposed, for it is found absent in the most intense icterus; it is owing, more likely, to the ingesta. The brownish color is connected with dryness of the tongue. The so-called *raspberry* tongue depends on the contrast in appearance of the filiform and fungiform papillæ. The latter having but little and translucent epithelium, are plainly to be seen as red points, when the former by the alteration of their epithelium produce the coating; the fungiform papillæ being especially numerous on the anterior half of the tongue, it is here, too, where the raspberry appearance is most observed. This appearance is by no means characteristic of scarlatina, as many believe; it is quite common in children, with slight and even with normal coating, and has, therefore, neither in children nor in adults the slightest diagnostic value.

The *composition* of the abnormal coating resembles that of the normal coating of the tongue; *i. e.*, it consists of masses of epithelium, epithelial processes with granular cells that are thrown off, fat particles, fungi, and accidental admixtures.

The *cleaning of the tongue* usually proceeds gradually, the coating getting thinner and thinner; it is but seldom that the coating is thrown off in its whole thickness at once. Cleaning over the whole extent of the tongue never occurs at one time. The first clear portion is mostly the point of the tongue, where the cleaning proceeds to the edges and regularly backwards; sometimes the middle, very seldom the posterior portion, are first cleaned. The cause of this variation is, most likely, the varying forms of the frictional motion of the tongue; solution or absorption of the epithelial cells is unsatisfactory explanation, and has

never been proved; and a clearing up of the darkened or discolored cells is certainly very improbable.

The adherence of the coating to the tongue depends generally on its duration; reproduction after artificial removal is undesirable, as showing the continuance of the diseased condition.

The *taste* is either unchanged, especially with slight coating, or cannot be indicated by the words so often quoted.

The *diagnostic signification* of the coating is limited entirely to the fact of indicating the existence of some diseased condition in general. [?] In a *prognostic* point of view, the disappearance of the coating is of value, as it is one of the first signs of the decrease of the disease. The significance of the dark coatings of a dry tongue will be considered under the latter heading.

b. *The Smooth or Shining Tongue*.—In consequence of the direction of the papillæ, the tongue, normally, is smooth on rubbing backwards, but rough to the touch, passing over it from the back, forwards. In disease, an extraordinary smoothness is not of unfrequent occurrence, accompanied, too, by reddening of the mucous membrane, and diminution of papillæ. The papillæ become smaller—and the smaller they become, the greater is the reddening; for the epithelial covering becoming thinner at the same time, the blood is more easily seen through it. The abnormal smoothness of the tongue depends on the separation of the epithelial processes. The fungiform papillæ appear more prominent, on account of their thinner epithelial covering. Partial separation causes only partial smoothness. The smooth, shining tongue, being moist, reflects. Abnormal smoothness is found in acute as well as chronic diseases. In the former, it is without diagnostic significance, and, following generally the separation of the coating, has only the prognostic value of the cleaning of the tongue, as the epithelium is quickly reproduced in convalescence. In chronic diseases the smoothness indicates deficient reproduction of epithelium, from greatly disordered nutrition, without, however, indicating the nature of this disorder; it is unfavorable, prognostically, the disease being mostly incurable.

c. *The Dry Tongue*.—Dryness of the tongue is found in various degrees in health as well as in disease. It may be so excessive as to interfere with motion and with taste. The tongue is generally dry, partially, or over the whole extent, only on the back. If the smooth tongue becomes dry, it ceases to reflect. The color depends on the coating, which, as already mentioned, in extreme cases of dryness, becomes dark from fissures and rupture of the blood-vessels. For prog-

nostic purposes, it must be noticed whether the dryness is only temporary or continues, and for how long it can be made to disappear by moistening. Temporary dryness is caused by breathing through the mouth, and is of no consequence. [Though the habit of some persons of breathing continually through the mouth is an unnatural and injurious one—the cause of snoring while sleeping, etc.—L. E.] When dryness lasts for days, and when it cannot be relieved by moistening the mouth, it is serious. Dryness usually commences at the middle, because that portion is least touched by the moisture of the mouth. Diminution of this moisture is the nearest cause of the dryness; the secretions of the mouth may be actually diminished, evaporation increased, or both these circumstances co-exist. Dryness is, therefore, almost always met with in unconscious patients, who do not feel its inconvenience. Its diagnostic importance is limited, excluding accidental drying circumstances, to the proof of some disease. Appearing in the course of acute diseases, and not yielding but for the moment, to moistening, the prognosis is rendered unfavorable; the greater the degree, the more unfavorable, of course. The becoming moist again of the tongue, especially when it continues, is a favorable symptom.

Folds and Cracks of the Tongue.—Folds on the tongue are of no importance whatever. They occur only after about the eighth year, generally, increase in number and depth with age, and are connected with the frequent change in the form and position of the tongue. If the tongue is coated, the papillæ in the folds remain coated longest, on account of their being less exposed to friction. Discolorations, for the same reason, are seen here longest. From the folds, cracks may follow a contraction of the mucous membrane in extreme dryness. As these cracks heal, cicatrices form, which are distinguished from the folds by the absence of papillæ.

34. The treatment of neuralgia must be considered under two main points of view. We have to deal with the pain in the paroxysm, and we must seek to meet that morbid condition, whether of the solids or the fluids of the body, upon which the pain depends, so as to prevent its recurrence. The former indication is met by various remedies, amongst which, opium and its preparations, applied locally or given by the mouth, occupy the first rank. But, however grateful the sufferer may be for the relief they afford, they rarely, if ever, suffice to effect a cure without the aid of other agents of an alterative or roborant kind. The topical application of opium or morphia operates variously, according to the manner in which the application is made. It may be laid on the unbroken surface in conjunction with hot fomentations or poultices; it may be used endermically, the anodyne powder

being sprinkled over the cutis, from which the epidermis has been removed; or a solution of morphia may be injected into the cellular tissue by the aid of a small syringe. Dr. Kurzak, of Vienna, was, I believe, the first to employ the subcutaneous or hypodermic method, which was then largely used by Dr. Wood, of Edinburgh, and has now been tested all over the country by numerous practitioners. Which-ever method we avail ourselves of, it is scarcely necessary to say that the application should be made at the seat of the pain, or as near to it as possible. This holds good equally of veratria, aconite, chloroform, or belladonna—of hot fomentations, turpentine stupes, or of such counter-irritants as croton oil, vesicatories, or issues. The external application of tincture of opium with moist heat is often of great use in the milder forms of neuralgia, and has stood me in good stead in various cases. It is important that the medical man should himself apply the fomentations in the first instance, as they are often used negligently, and applied tepid instead of hot. The physician's aid-de-camp should be as trustworthy a person as the aid-de-camp of a general, or his orders will be as recklessly carried out as the order that led to the gallant charge at Balaklava. The medical man should take as little for granted in the sick-room as possible, and think nothing that concerns the welfare of his patient beneath his notice. The endermic application of morphia cannot be used where the disease is very paroxysmal, or the attacks of pain very brief; but in protracted cases of neuralgia—as, for instance, in gastrodynia—I have often found it of great value. I order a space of the size of a five-shilling piece to be blistered, the raised epidermis to be removed, and a powder, containing a grain of morphia to four grains of white sugar, to be sprinkled over the surface. A simple dressing is then applied. Three or four powders may be applied in this way on successive mornings, or at still shorter intervals. There is generally a little smarting pain at the time of the application, but soon after relief generally ensues from the narcotic.

In the anomalous pains of the back accompanying uterine and ovarian derangement, the endermic application of morphia to the lumbar or sacral regions is often of decided service.

35. Peroxide of hydrogen, which was discovered by Thénard in 1818, is, in fact, water charged with oxygen in the active state. In his paper, Dr. Richardson took up the following points:—The history of the substance; its preparation, with special regard to pharmaceutical applications; its physical and chemical properties; its relations to ozone; its physiological properties; its therapeutical value.

It was obvious, from the author's description, that some obstacles lie

in the way of the application of the peroxide of hydrogen for medicinal purposes, owing to the difficulty experienced in its manufacture. This difficulty, however, Dr. Richardson greatly simplified; and we should infer that any experienced pharmacist could supply the medicine after a short acquaintance with the process of making it, as readily as quinine or other remedial bodies, in preparing which time and care are the most important requisites. It was shown, indeed, that if perfectly pure peroxide of barium were supplied to the profession, every practitioner in the country could make his own solution of oxygen as he might want it.

The description of the chemical and physical properties of peroxide of hydrogen was unusually interesting. Passing over the facts relating to the influence of inorganic bodies upon it, those bearing on organic matter strike one most forcibly. Thus, blood freed from fibrine absorbs the oxygen from the peroxide, and, if it is venous blood it becomes arterial, with a rise in the temperature. Washed fibrine and cellular tissue in the fresh state evolve the oxygen. Albumen, urea, gelatine, fibrous membrane, and skin produce no change. Grape sugar, and, indeed, all the sugars brought into contact with it, become decomposed, and evolve carbonic acid. Starch undergoes the same modification.

These observations refer to animal substances recently used; but when putrefaction has commenced, then the oxygen of the peroxide seems to act on all alike, and to produce rapid disintegration.

Another curious fact relating to the peroxide was, that its oxidizing power was easily prevented by the presence of certain bodies having a wide extension of names, but analogous characters. Ammonia in vapor or solution, tobacco, hydrocyanic acid, solution of aconite, and, in short, all the narcotics that are miscible with water, possess this neutralizing property; the permanency of the result being decided by the physical character of the agent employed.

The section of the paper on the relations of the peroxide of hydrogen to ozone was an interesting one, and indicated a careful study of this debated question. It is clear that Dr. Richardson looks upon the two bodies as one and the same. If he has any doubt, it is to the effect that in peroxide of hydrogen there is not any affinity at all between the two elements, hydrogen and oxygen. We pass the matter, to dwell on the physiological actions of the peroxide. These seemed to arrange themselves into the following brief propositions:—A weak solution oxidizes blood; but this effect can be stopped by the actions of the alkaloids and of narcotics. The peroxide supports the life of

fishes; but the body of the animal causes rapid evolution of the gas. The solution injected into the left side of the heart of an animal restores the irritability, but appears to have an opposite effect on the right side. Injected into the arterial system immediately after death, it seems to restore to the muscles the power of contracting on the application of an irritant. It suspends to a considerable extent post-mortem rigidity, and it reduces spasmodic action, excited by such bodies as ammonia and hydrocyanic acid. On the therapeutical value of this powerful agent, Dr. Richardson did not dwell long; but reserved this essential point for another communication. He showed, however, that as an antidote to the alkaloidal poisons, as an external application to decomposing sores, as an internal remedy in fever, where the patient literally dies from deficient oxygen, and in diabetes, the medicine might be used with the very best promises of success. In the way of a pleasant acid drink, one could give, said Dr. Richardson, to the typhus-stricken man 100 cubic inches of active oxygen per hour. In diabetes, one fact had been made out also by the author, that under the influence of the peroxide the quantity of sugar at once became less, and the excretion of urine decreased in a relative degree. After illustrating his paper by experiment, Dr. Richardson concluded by stating that, in placing it on the annals of the Society, he would guard himself, once and for all, from any exaggerated suggestions as to the value of this new remedial agent. The subject, indeed, was so novel, that after twelve months' study of it he had feared to use a sentence that had not been considered over and over again. He did not pretend to know all the properties of the peroxide. He did not bind himself inviolably to any opinion offered on the present occasion; nay, experience might show that the substance discussed in a medicinal sense took new and even different directions from those with which he had opened the argument. His own intentions and objects would be served if he did but call forth investigation and fact, let the course of things bend in whatever way they might.

Dr. Thudichum expressed an opinion that the peroxide of hydrogen, as made by Thénard's process, could not be altogether freed from chlorine; and suggested that the substance should be made by the simple sulphuric acid process. He also dwelt on the fermentation theory in relation to certain of the effects of the peroxide. He expressed a disbelief as to the existence of "ozone."

Dr. Lankester asked Dr. Richardson whether oxygen, as it was liberated from the solution, was in the active state; and Dr. Richardson having answered in the negative, Dr. Lankester proceeded to defend

the ozone theory. He believed with the author of the proposition to use the peroxide of hydrogen as a medicine, that great therapeutical effects would come from it. He suggested experiments to determine whether the amount of excreted matters—such as urea and carbonic acid—would be influenced by the administration. It was a remarkable fact, that so powerful a substance should so long have remained uninvestigated as a medicinal agent.

Dr. Garrod compared the chemical effects of the peroxide of hydrogen with the effects of the permanganates. He had tried the permanganates in diabetes; but he thought with the effect only of increasing the amount of sugar. He would wish to hear whether the physiological effects of the peroxide and of a permanganate were the same. It might be that the saline character of the latter produced a difference.

Dr. Richardson, in reply, said that in regard to the presence of a trace of chlorine in the solution, it made no difference; for the effects of chlorine-water were very analogous, and it might turn out ultimately that a direct relationship could be traced between chlorine and oxygen water. Thus, water boiled free of oxygen, and charged very feebly with chlorine, would, as he should show on another occasion, support the life of a fish longer than the water altogether destitute of oxygen. In respect to ozone, he had no doubt that such a substance existed, and he was inclined to think that it was a modification of oxygen. He thought that, in testing the effects of the peroxide of hydrogen, it were best to try it in disease without any further intermediation, selecting for its trial extreme diseases, such as were not at this time amenable to treatment. The actions, *physiologically*, of the peroxide of hydrogen and of the permanganates were entirely different: the latter injected into the veins of a horse produced permanent fluidity of blood, and transformed the blood on the arterial side to the venous color. The difference depended on the fact that in the permanganate the oxygen was combined, while in the peroxide it might be considered as virtually free.

Dr. Garrod, Dr. Radcliffe, and several other Fellows, observed that they should be anxious to give the peroxide a fair trial as to its therapeutical value; and inquiry was made as to the means of obtaining the solution.

TRANSLATED FROM THE FRENCH, EXPRESSLY FOR THE MONTHLY.

Lectures on Diphtheria. (Egyptian Disease.) Delivered at L'Hôtel Dieu, Paris. By M. TROUSSEAU.

(Translated by the Editor from La Clinique Médicale de L'Hôtel Dieu, of M. Trousseau.)

(Continued from page 312.)

You have had very frequent occasion to observe these symptoms in the advanced stages of the disease in patients brought into this hospital, and once you have seen the laryngeal affection at its very commencement. It was in a little boy eighteen months old, who was strong and vigorous; he entered the hospital with his mother on account of a severe and confluent sudoral eruption with which they were both affected; otherwise than this, they were perfectly well. Six days after their arrival in the wards, where there was a child with the croup and a woman with false membranous angina, the mother complained of a sore throat. Upon examining the throat, we found the right tonsil and the uvula covered with false membranes, the cervical ganglions increased in size. I immediately cauterized the diseased parts with hydrochloric acid, and the next day the membranous concretions had almost disappeared; but twenty-four hours after, they were reproduced more abundantly, and thicker upon the uvula, and this time upon both tonsils. The cauterization with hydrochloric acid was repeated, and again the next day, although there was a marked amelioration which continued. The patient recovered.

The child was taken sick three days after the mother. We perceived a whitish, thick concretion upon the right commissure of the lips, which was the seat of a slight excoriation. I cauterized it with the nitrate of silver, and taking into consideration the age of the patient, I warned you of the danger which threatened it. In fact, the diphtheria occupied both commissures the second day; still the tonsils, the pillars, and the veil of the palate presented nothing abnormal, not even redness. The next day the false membranes of the lips were less thick, but the child's voice seemed to me hoarse. My chef de clinique, Dr. Moynier, at his evening visit, noticed the hoarseness of the cough, which had become harsh; the voice was muffled, and paroxysms of suffocation had already occurred during the course of the day. Neither the tonsils nor the palate were yet affected. An emetic was prescribed.

When we saw the patient, fourteen or fifteen hours afterwards, we learned that the paroxysms of suffocation had become so violent and so frequent, that tracheotomy had been judged necessary. The house-physician had performed it, and the moment the trachea was opened, a false membrane was thrown out. We found the child in a fever, his neck very much swollen, and the next day he died. We ascertained, by examination that very morning, the existence of a pneumonia upon the right side, characterized by dullness, difficulty of breathing, and bronchial respiration.

At the autopsy, we found no concretions, neither upon the tonsils nor upon the veil of the palate; but the larynx and the trachea were invaded by false membranes, which extended even into the smallest bronchial ramifications. Lesions of pneumonia existed throughout the inferior lobe of the right lung, and in some disseminated points in both lungs.

Croup was then first announced by a small, dry cough, occurring in short paroxysms, at short intervals. The voice, which up to this moment was clear, began to change a little, and presented, like the cough, characteristics which are important to understand, which cannot be described, but which once heard will never be forgotten. The cough is not sonorous, noisy, but rather hoarse, subdued and dry, producing a sound which may be compared to the barking of a young dog at a distance. The word *croupal* gives a wrong idea of it, for this better explains the cough of stridulous laryngitis, of false croup, than that of true croup. At the beginning, it is very frequent, but I am emphatic upon this point: it ordinarily loses this character according as the disease progresses.

Up to this moment, there is no difficulty in breathing, but after a very little while, in children, a longer time in the adult, this difficulty of breathing commences, principally at night, and then begins, at each inspiration, a laryngo-tracheal hissing sound, which is also heard, but in a less degree, in expiration. After each fit of coughing, the hissing sound becomes more marked. It is produced by a short inspiration, dry and metallic-like, which can be perfectly heard at a distance. Upon auscultating the trachea or the posterior part of the thorax, it was so loud that it masked the sound of vesicular expansion. This laryngo-tracheal sound is explained by the disposition of the apparatus of the voice. If it is stronger in inspiration, it is because the lips of the glottis, having a tendency to approach each other, render the entrance of air more difficult; while in expiration, they tend, upon the contrary, to separate. The pain felt in the larynx is generally very slight; the paroxysms of coughing induce it, however, when it is seated not only in the larynx, but in the trachea, and extends even to the anterior part of the sternum.

The disease continuing to be aggravated, the cough becomes less and less frequent, the paroxysms becoming less frequent, according as the false membranes extend, and become thicker, recurring every fifteen minutes, every half hour, and sometimes at longer intervals. The cough also loses its harshness, and is most frequently lost, while the voice, which was raucous and metallic, is also lost. The patient is often aphonic. *Vox nihil significat*, said Aretæus. These phenomena, which ordinarily accompany the difficulty of the respiration in pseudo-membranous laryngitis, are the most certain signs of the presence of diphtheritic concretions upon the lips of the glottis.

You readily understand why this is so; you know that slight mucosities, even arrested upon the vocal cords, are sufficient to alter the timbre of the voice; sometimes, even to entirely obliterate it for the time. It is not, then, surprising that there should be more or less complete aphonia, when false membranes of a greater or less thickness are form-

ed upon the lips of the glottis. The same thing takes place which happens if, between the reeds of a clarionet or a bassoon, you interpose a piece of moistened parchment; the comparison is exact, for the false membrane can be compared absolutely to a piece of parchment swollen by moisture. The larynx no longer performs its function, and the voice and the cough changing more and more as the concretions increase upon the vocal cords, end by being altogether lost. This is a physical phenomenon, which is explained readily by the disposition of the parts. If, in rare cases, the cough at times takes on a harsh tone and the voice regains its metallic character, it is because the vocal cords have been freed by violent efforts of expiration and expectoration, or that the tenuity of the pseudo-membranous concretions which line them do not hinder the air from vibrating in passing the larynx. As a general rule, the cough, croupal at first, becomes less and less sonorous.

I have said that after a certain length of time, short in children, longer in the adult, a difficulty in the respiration arises; this difficulty rapidly increases. A phenomenon then takes place, which I wish specially to call your attention to, because, under many circumstances, it might lead into error, cause the nature of the disease to be misunderstood, or at least, give rise to a belief in the success of the medication employed. Although the lesion of the larynx persists, although the mechanical obstacle to the passage of air is permanent, although the false membrane which constitutes this obstacle remains adherent to the vocal cords, *the difficulty of the respiration is intermittent*. A child or an adult, either can have during the course of the day many accesses of dyspnœa, almost reaching suffocation. During the interval of these paroxysms, if they are not agitated, if they are not frightened by the presence of the physician; if, in fine, nothing happens to disturb their tranquillity, and consequently, hasten their respiration, it will continue almost as regular as in the normal condition, and the laryngo-tracheal hissing sound will hardly be heard. But from time to time, every hour, or at first, every second or third hour, and afterwards at shorter intervals, they will be seized with fits of suffocation without any apparent cause. You will then observe that they will sit up, and sometimes they will rise suddenly, and get out of bed as if in search of air. They make great efforts, the head is thrown back, the mouth is opened widely, and all the muscles which conspire in the act of respiration are convulsively contracted. After the access has lasted four, five, or six minutes, calm is re-established, to last for a little while.

These facts, indicated by Royer-Collard in his article in the *Dictionnaire des Sciences Médicales*, and by M. Bretonneau in his *Traité de la Diphthérie*, had not escaped the earlier writers. I cannot refrain from quoting the following passage from Borsieri, who has dedicated a special passage to this subject in his chapter on croup. It is entitled *Fallax morbi mitigatio*. Animadvertendum quoque est non rarò et subito præter rationem et sine ulla materiæ obstruentis excretionem omnia sic in melius verti, ut liberior, imò naturalis omninò respiratio reddatur, ut infantes puerive e lecto sur-

gere et ombambulare possint: paulò post verò fallaci hinc symptomatum quieti novum repente succedere insultum sæpe numero gravem . .

* * * *

This intermittence of the symptoms of suffocation has been accounted for by a spasmodic constriction of the glottis, a spasm produced either by the inflammation of the mucous membrane of the air-passages, or by the presence of plastic lymph effused within it, or by both combined. This was the opinion of Vieussieux, of Albert of Bremen, of Jurine, and agreed to by the members of the commission of the Academy appointed to decide upon the Memoirs of the Concour of 1812. This commission, adopting the idea of Albert of Bremen, said still further, that if the false membranous concretions sometimes formed a purely mechanical obstacle to the entrance of the air into the bronchi, it was the spasm alone which most generally arrested and embarrassed the respiration by contracting the air-passages. M. Bretonneau opposed this view, considering the mechanical obstruction produced by the concretion to be the entire cause. As to the intermissions, "they are comprised," said he, "in a numerous class of pathological phenomena. What practitioner has not seen an example of the kind? Do not scirrhus diseases, calculi, and many other permanent causes of pain, reveal their presence in an intermittent manner?" This spasmodic element, if it does not have that entire influence accorded to it by some, seems to me, however, to play at least a considerable rôle in croup, as well as in those chronic affections taken as examples by my illustrious master.

The paroxysms become more frequent and severe up to the time of death, the intervals of ease growing less and less, the laryngo-tracheal sound being continued. From time to time, the poor children suddenly sit up in a state of agitation difficult to describe, seizing the curtains of their bed, which they tear in their movements of convulsive agony; sometimes they scratch the paper upon the walls with their nails; they throw themselves about the neck of their mother or persons around them, embracing them. At another time, they exert their powerless efforts upon themselves, seizing with their hands the anterior part of the neck, as though they would pull away something which strangled them. The face swollen, purple, their eyes haggard and shining, express the most painful anxiety and the greatest terror. The child then, worn out, falls into a kind of stupor, during which time the respiration remains difficult and hissing. Then the face and lips are pale, the eyes dull. Finally, after a terrible effort at respiration, the agony commences and the struggle ends.

In the adult, the picture is still more terrific. The violence of the paroxysms of suffocation, the kind of rage which possesses the dying victim, strangled by an obstacle which he cannot get rid of, are impossible to be depicted. At last, when the lips become livid, when the face is swollen, purple, at the end of the asphyxia, the adult, like the child, falls into a kind of stupor and of intoxication, and ordinarily dies in a state of prostration. "*Sic irrequieti assidue jactantur, donec penitus prostrati jaceant et strangulati pereant.*"—(Borsieri.) I

say ordinarily, because it is true that in some exceptional cases, the patient suddenly dies in a fit of suffocation.

The intermission of the paroxysms of suffocation, I said just now, was a fact essential to know, because it might lead into error. Suppose, for instance, that having been called to see a case of croup, you have applied leeches, or have bled in the arm or the foot, or given an emetic, or applied a blister over the neck or chest; and suppose that immediately afterwards there comes on one of those moments of ease of which I have spoken, you would refer it to the efficacy of the remedies employed, while it would be nothing more than the natural progress of the disease. It is therefore important to be aware of this. Still, independently of this intermission, due to a spasmodic element, there is another, occasioned by the expulsion of the false membranes, which produces the suffocation.

It sometimes happens, not often, yet perhaps once in six or eight cases, that in an effort of vomiting or of cough, the larynx is suddenly relieved by the patient, whether a child or an adult, throwing off pieces of false membrane or membranous tubes from the trachea and glottis. At the same moment, relief instantly follows, the same 'as after tracheotomy. The patient sleeps tranquilly, and this tranquillity may last four, six, eight, ten, fifteen or twenty-four hours. The parents have renewed hopes, and the physician is tempted to indulge in them; but this fact should not be lost sight of, that diphtheria is a disease which, if it grants occasional respites, does not so easily pardon. It should not be forgotten that when a false membrane is detached from the larynx and trachea, another is soon formed; that the exudation, running through its stages again, lines once more the parts, at first with a thin covering, which gradually thickens, re-establishing the obstacle which before existed. The same paroxysms take place, and if these new diphtheritic concretions are again expelled, there is reason to fear that they will again be formed. I have seen children throw them off three and four times, and finally succumb to them; while again, I have seen, but under circumstances unfortunately very rare, complete recovery follow the spontaneous expulsion of the false membranes. There are, I repeat, exceptional cases; so rare, that during quite a long medical career, during which I have seen a large number of children and adults afflicted with croup, I have met only six cases.

It is a remarkable fact, that while the expulsion of the false membranes offers incontestably to the patient favorable chances of recovery, these chances are lessened, if, the recovery not taking place spontaneously, you are finally obliged to perform tracheotomy. In a word, this operation succeeds better in a child who has not thrown off any false membrane, than in one who has, and the reason of this you will presently see.

The presence of the false membranous concretions in the larynx and trachea proves that the diphtheritic inflammation has invaded these organs. The expulsion not only does not hinder the extension of the disease, but rather favors it. After tracheotomy the disease seems to be arrested. But the expulsion of the false membranes, deferring the time of interference upon the part of the physician, yet permits the

inflammation to extend, so that in a child who has been relieved of the false membranes by vomiting or by coughing, who has consequently experienced a momentary amelioration, which has deferred the operation twenty-four hours, you run the risk of finding the bronchial tubes affected even to their smallest ramifications; whilst in another, upon whom the operation of tracheotomy has been early performed, this does not occur under ordinary circumstances.

I say under ordinary circumstances, because there are other circumstances very infrequent, it is true, less frequent than is usually supposed, where the disease, instead of proceeding from the pharynx towards the larynx and trachea, follows an inverse order, first attacking the trachea, and even commencing in the bronchi, and then ascending towards the larynx. In fact, diphtheria, manifesting itself simultaneously upon different parts of the body, may become developed in the interior of the larynx, trachea, and bronchial tubes, at the same time that it is observed upon parts accessible to the sight. This is what absolutely took place in the little boy in the ward St. Bernard, which case I have already mentioned. The following is another similar case, an account of which was taken by my chef de clinique, Dr. Blondeau, while he was interne at the Hôpital des Enfants, under M. P. Guersant.

A little boy three years and a half old was brought to the hospital the 9th of November, 1847, presenting all the rational symptoms of croup. He had been taken on Saturday, October 30th, with a fever, and on the following Monday measles appeared, which lasted up to Saturday; the eruption not being very severe, the catarrh, on the contrary, being well marked. On Saturday, and still more the next day, the attention was attracted to a noticeable difficulty in the respiration, and a hoarseness in the voice, which continued to increase.

At the time the child entered the hospital the following symptoms were observed: countenance pale, of a bluish color; considerable difficulty in breathing. The nasal fossæ were filled with a thick grayish mucus, yet on examining the throat very carefully, no appearance of false membrane was discovered. The patient was vomited, but it was not followed by the slightest relief. The restlessness and oppression were excessive, the pulse 120 a minute. Upon auscultating the chest, sonorous râles were heard.

The presence of exudations evidently diphtheritic in the nasal fossæ, giving rise to the idea that false membranes might exist behind the veil of the palate, a mop wet with a strong solution of nitrate of silver was applied to this region. It increased the restlessness to a considerable degree.

It is a fact worth mentioning, that the submaxillary ganglions were never engorged, and it is explained by the absence of any lesions in the larynx. An emetic of tartarized antimony (5 centigrammes) was prescribed.

Nov. 10, quieter, less dyspnœa, but the cough hoarse; voice gone; the face still bluish, and the nasal concretions persisting. The pulse small, thready, 128. The emetic was repeated, which did not produce vomitings, but the patient had ten green passages from

the bowels. The oppression returned in a greater degree, and the inspirations increased to forty-six a minute. There was orthopnoea. The voice was completely extinguished; expiration was noiseless; inspiration noisy, hoarse; cough very hoarse. The nose and the ears were cold, the bluish tint of the face increased; the eyes, always almost closed, had an expression of languor. The poor child moved its head from side to side, as though seeking an easier position, but soon he became quiet on account of the state of asphyxia, probably increased by the feebleness following the frequent passages from the bowels. The mind remained clear.

During the night he had two violent attacks of suffocation, and the next day the asphyxia was greater than the night before. The face was pale, swollen; the lips dark, cold. The clearness of the mind appeared perfect, the child expressing by signs that it wished to drink; deglutition was performed perfectly. Death during the day, without a resort to tracheotomy; the progress of the disease rendered it useless.

At the autopsy, the air-passages were found lined with thick, false membranes, from the larynx to the first bronchial ramifications; below that, the bronchi were filled with thick mucus. In the nasal fossæ, the exudations seen during life were formed, but there were no false membranes, properly speaking, and there was no trace of them, either in the pharynx or in the mouth.

In fine, to repeat what I have just said, and it is a point of sufficient importance to warrant a repetition, although the expulsion of false membranes can bring about the spontaneous cure of croup under some rare circumstances, it is evident that in cases where the disease has followed its progress downward, which is the most ordinary course, the chances of success of tracheotomy are much less favorable in those previous cases in which membranous tubes have been discharged, as that indicates the propagation of diphtheria to the bronchial apparatus. This extends sometimes very far, and we have had occasion to see children who had been subjected to the operation of tracheotomy eject false membranes, moulded in the form of the small bronchial ramifications. I have still in my cabinet one of those false membranes, which I have shown to you, and which was obtained in your presence, at the autopsy of a little girl who died in our ward, Saint Bernard. This diphtheritic aborization comprised the trachea, the bronchi, and extended even to the fourth ramifications. I have met with a similar case in a child of five years, who was cured by tracheotomy; the false membranes were detached at the very moment of the operation.

Most generally, indeed in two-thirds of the cases, according to the statistics given upon this subject by M. Bretonneau, and subsequently by Dr. Hussenot, in his Inaugural Thesis, (Paris, 1833,) pseudo-membranous concretions do not pass beyond the trachea. This is a remarkable fact, and I shall hereafter call to your attention a circumstance favorable to the success of tracheotomy.

One word now, gentlemen, concerning *accidents and general symptoms*. At the outset, I told you there is a *febrile movement*; there is

also apparent *ganglionic swelling*, more considerable than in some other kinds of angina; less, however, than in scarlatinous angina; less also than in malignant diphtheritic angina, of which I shall speak to you hereafter. This febrile movement continues a day or two, and ceases entirely when the disease is prolonged. The soreness of the throat is so slight, that children four or five years old, who can tell how they feel, do not complain of it. This almost complete absence of general symptoms, and of sore throat, permits the disease to advance insidiously to such a degree, that the physician is only called when the affection has attacked the larynx; that is, when croup is fully declared. Then, also, the pseudo-membranous concretions, which at first held possession of the pharynx, have had time to become detached, and it is with difficulty that even a few traces of them can be found on the tonsils, or on other points of the mucous membrane of the palate. This is an important fact; it explains very many cases in which pseudo-membranous laryngitis has been believed to have been developed at the very outset, without having been propagated from the pharynx towards the inferior parts.

Here, gentlemen, is the place to speak of this croup *d'emblée*; it is well worth our while to stop and consider it. You will hear it said by men of admitted experience, that they have often seen children die of croup whose pharynx had not been involved. Before M. Bretonneau read, in 1818, before the Academy, his first paper on diphtheria, before the publication, in 1826, of his treatise, the fact was generally admitted, that membranous croup commenced with the larynx. M. Bretonneau caused a revolution in science by asserting and demonstrating that almost always, at least nineteen times out of twenty, it was not so, and that the disease commenced with the pharynx. Guersant, his friend, and for a long time physician of the Children's Hospital, after having supported the former opinion, when once his attention had been awakened to the subject, soon gave in his adhesion to the latter opinion, which became also that of all those who, from that time forward, as well at Paris as everywhere else, paid any attention to the matter. For my part, I declare to you, that having seen perhaps more cases of croup than the busiest physicians of the capital, for the reason that, on the one hand, I remained eighteen years in charge of the sick children in the hospital, and because, on the other hand, having introduced here the operation of tracheotomy in the treatment of laryngeal diphtheria, I have the honor of being often called in consultation to judge of the propriety of the operation,—I declare to you, that the proposition enounced by my venerated master is true, and that in the generality of cases, croup commences with the pharynx.

I do not deny that there is such a thing as croup *d'emblée*; I not only do not deny that the pellicular disease can commence at the very outset in the larynx, but I even admit that it may, under certain very rare circumstances, attack in the first place the bronchi. Guersant and many others have cited examples of this. According to the report of Dr. Yvaren, of an epidemic which prevailed at Avignon during the year 1858, this form of the affection, commencing at the very

outset with the larynx and the bronchi, was that which the disease more especially assumed. I myself, indeed, have called your attention to two cases in which the disease appeared simultaneously in the bronchi, the trachea, and other parts open to view. Why should it be a matter of surprise that diphtheria should be localized from the commencement on the laryngeal mucous membrane, as it is localized on the nasal, buccal, vaginal mucous membrane, etc.? I do not deny that croup may commence with the larynx; such cases are, however, rare and exceptional. The reasons for the belief that the former is the most frequent order, are, that a sufficient attention had not been paid to the examination of patients; that the throat was not examined with all the care which should have been given to it; that above all, the physician often came too late, that is to say, when the laryngeal concretions had had time to disappear, as I have just told you; this being so on account, as I have also told you, of the slowness of the general or local phenomena, the forerunners of the disease. Under similar circumstances, when you shall be called to attend a child who is said to have had the croup for about two days only, recall the recollections of the parents, and you will learn that the child had been suffering for a much longer time; that for five or six days he had not eaten as well as usual; that he complained of some difficulty in swallowing; that he refused to take any nourishment in any degree hard, as a crust of bread; you will also learn that there was a slight swelling of the neck; and these are certain indications of sore throat, and of the previous existence of false membranes, which you can no longer see.

To return to these general phenomena: in the treatment of the diseases of children, be very distrustful of those accidents which are so slight in appearance, but which may yet be the commencement of a terrible disease. When you see a child suffering for some days from a slight indisposition, accompanied by an insignificant feverish manifestation, and not able to tell you himself where he suffers, direct your attention at once to the throat; depress the tongue in such a manner that you can see even to the bottom of the pharynx, and in a great number of cases you will see that this slight indisposition announced the commencement of diphtheria, and you will find pseudo-membranous concretions on the tonsils or the veil of the palate.

In the case of the adult, matters go on very much in the same way. The general restlessness, the feverish manifestations, are hardly noticed; there is scarcely any sore throat, and you will even meet with patients having the pharynx lined with false membrane, who will complain of nothing but a slight difficulty in swallowing; but here the danger is even greater than with the child. For the adult having in fact the opening of the larynx proportionally larger than it is in the child, and the calibre of the trachea being greater, the air finds a sufficient passage even when the walls of these passages have already begun to be covered with pseudo-membranous concretions; and when the symptoms of croup declare themselves, diphtheria has had time to become deeply fixed in the bronchial ramifications.

These phenomena had for a long time impressed me, for I had the very best of opportunities to observe them in the epidemic at Sologue,

which I was commissioned to examine into in company with Dr. Ramon, in 1828. Permit me, gentlemen, to report to you a few of the facts of which I was then a witness.

I was one day—and it is a day too memorable for me to forget it—I was one day dining with a Mr. Bethune, whose chateau is situated a short distance from Selles, in the department of Cher, when a peasant came for me in great haste to see his wife, who, he said, was choking. I went immediately to the patient. I found a woman about twenty-six years of age, still clad in her fête dress. It was Pentecost Sunday. She had been to mass in the morning, more than a quarter of a league from there; after having returned on foot, she had dined as usual, and was just preparing to go to vespers, when she was suddenly seized with such a violent attack of suffocation, that her husband feared she would not live until we could reach the spot. The unhappy woman was in fact expiring when I saw her. I examined the throat at once; I discovered thick, false membranes lining the pharynx. The nature of the disease was from that moment sufficiently clear to me, and the poor woman being *in extremis*, tracheotomy alone could prevent immediate death. Without a moment's hesitation, I prepared to operate. I was alone, with no other assistant than the husband, without any other instrument than a pen-knife with a convex blade, which I fortunately had with me; then I was obliged, in default of a tracheal canula, to manufacture a sort of rude one out of a leaden bullet, which I flattened with a hammer, and fashioned into a kind of tube. Unfortunately, the false membranes had already penetrated into the small bronchi; the patient died the next day.

The spontaneous appearance of the accident in this case gives you the measure of the slight degree of intensity of the general phenomena which for six days had preceded them; this fact supports what I have just told you concerning the slight influence which pharyngeal diphtheria, a disease which seems to confine itself to a local manifestation without serious importance, so long as it is limited to the pharynx—the slight influence which diphtheria ordinarily has upon the general condition of the human economy in the early days of the disease.

In a village of the department de l'Indre, in which the epidemic prevailed, the garde champêtre, seventy-one years of age, was busily engaged in the performance of his duties, when I saw him seized with false membranous angina, of which he died the following day, after frightful spasms of suffocation.

In that very same commune, a family was pointed out to me, several members of which had fallen victims to the disease, and I was called to attend upon a little girl who was attacked by it. When I reached the house she was absent, and it became necessary to go for her into the fields, where she was watching turkeys. I waited for her an hour; when she arrived, she was panting, and could hardly breathe. During the evening, she died of croup. Although that very day the poor child had made no change in her usual mode of life, she had, however, been sick for eight days; but sick without general symptoms of any gravity, however, since, as well as the woman of whom I have just spoken, and also the garde champêtre, she had continued to eat, to drink, and to go about her duties as usual.

Do not forget these facts, gentlemen: do not forget that in a great number of cases diphtheria has not, at the beginning, any apparent gravity. If there is fever during the first twenty-four hours, or the first two days, very soon there is no more of it, or indeed the fever is insignificant. The disease is merely announced by a slight difficulty in deglutition. The difficulty in breathing does not come till later; but then the disease has attacked the larynx, and it will sooner or later strangle the patient.

The prognosis of so terrible a disease is necessarily most unfavorable. Left to itself, it is almost invariably fatal. Here are a few examples: During the epidemic at Sologne, above mentioned, the prefect of the department Loire-et-Cher informed me that the neighboring communes of Ferti-Beauharnais were ravaged by malignant angina. I went thither, and at two farms of the commune Fremblevif, the farm du Roi David and du Grand-Pied-Blain, I was present at the most harrowing spectacle I ever witnessed. At one of the farms I found only the head of the family and a single servant-girl only sixteen years old. The man was seated in the chimney-corner, and did not even rise to receive me. He was twenty-seven years old. He told me that he and the young girl whom I saw near him were the only survivors of seventeen composing his household and that of the neighboring farm. The young girl had herself been ill, but she had been cured by the curé of Fremblevif, who had touched her throat eight or ten times with spirits of salt, (chlorhydric acid.) As for him, he knew the fate that awaited him. To-morrow or the next day, he said to me, I shall die as have died my children, my wife, my father, and my mother. In his fatalism, he awaited the issue, without wishing to do anything to evade it. I examined his throat, however; the tonsils were completely covered with pseudo-membranous concretions; the state of his respiration and of his voice showed me that the larynx had not yet been attacked. I endeavored to inspire him with hope, and citing to him the example of the young girl who was with him, I told him that all was not lost; that he might be cured if he would consent to be treated as his servant had done. He allowed himself to be persuaded, and with the blessing of God, my treatment had the desired result. This man was saved.

Such, gentlemen, is the terrible mortality which diphtheria draws in its train. Out of seventeen individuals two only escaped death, and these, even, owed their safety to energetic treatment.

Three years before, in another department, the epidemic had made such ravages in one of the villages in the neighborhood of the Chapelle-Véronge, near the Ferté-Gaucher, that out of sixty children, almost all of the male sex who were attacked by the disease, sixty succumbed. This fact has been reported by M. Ferraud, who mentioned it in his inaugural thesis on membranous angina, before the Faculty of Paris, in 1827.

When I arrived at Sologne, I found the physicians discouraged to such a degree that some of them were no longer willing to see the patients attacked by malignant angina, and the priests assured me that every one who was seized by it inevitably died. At Marcilly, in

Villette, sixty-six persons out of six hundred and fifty inhabitants (more than one-tenth of the population) had been carried off by the *white sore throat*; thus the priest of that parish had denominated the disease. At a later period, it is true, there were cures, when a medication entirely empirical had been put in practice; this was the employment of alum mixed with vinegar, a means used in the country in the treatment of sheep and hogs for sore mouth and sore throat.

Pharyngeal diphtheria is therefore almost invariably fatal, unless there is an early interference to arrest its progress; for although there are forms of the disease which, whether well or ill treated, almost always terminate fatally, that form which we have been considering is most ordinarily cured by the use of therapeutic means, of which I shall have occasion to speak to you.

Independent of the accidents consequent upon diphtheria, which I shall make the subject of an especial lecture—I refer to paralysis—there are certain *complications* which augment the dangers of the disease, and dispel the hopes of the physician at the very moment in which, by energetic treatment, he had checked the progress of the disease and counted upon a cure. I allude to *entiritis*, so frequent in children; to *pneumonia*, pointed out by Geisi; to *interlobular pulmonary emphysema* produced by the rupture of the vesicles broken during efforts in coughing.

The child to whom reference has several times been made is an example of the perineumatic complication which we have often met with elsewhere; and latterly we found, on the autopsy of another child, pulmonary emphysema. This little patient was brought to the hospital in the last stage of croup. He was expiring when the ward surgeon performed tracheotomy. The following morning, fifteen hours after the operation, the child suffered much from oppression. We hastened to clean out the internal canula, which was obstructed, but the dyspnoea continued as before; we heard, besides, a peculiar sound during expiration, produced by the passage of the air through the instrument, that sound which I have called *serratic*, (*stridor serraticus*,) comparing it to the shrieking of a saw (*serra*) in its passage through the wood. This sound is a prognostic sign of great value and grave importance; when I hear it, after having performed tracheotomy on a child, I know that that child will infallibly perish. Such was the case with our little patient, who died during the day. On opening the cadaver, we found the larynx lined with false membranes, which also entirely covered the tracheal artery, the bronchi, and all their ramifications, even the most minute; several lobes of the lung were separated by great bubbles of cellular tissue distended by air, which, having ruptured the vesicles, had brought on this interlobular emphysema.

This lesion, which M. Bretonneau remarked in two cases in his Treatise on Diphtheria, one that of a soldier of Vendée, the other that of a child in the epidemic de la Ferrière, is produced by violent efforts of inspiration in the very same manner as it may be produced in whooping-cough, as the consequence of violent and repeated fits of coughing. In the case of children subjected to tracheotomy, you will sometimes see this emphysema so very great that it will extend to the cellular

tissue of the neck, the shoulders and the thorax; it is by no means, as might perhaps be believed, the consequence of the operation, but existed before.

EDITORIAL AND MISCELLANEOUS.

—The one absorbing subject which has occupied the thoughts and directed the actions of all during the last month, and which still engrosses the attention, is war; war of the severest character—a civil, fratricidal war. Here, slow to accept the dire necessity, the people, once resolved upon the choice of alternatives, have, with unparalleled unanimity, arisen to meet the crisis, and all hasten to act with their whole might in the sphere of their respective duties.

Armies are usually of comparatively slow growth; here they have leaped into existence like Minerva from the head of Jove. The assembling of such large bodies of men for war purposes calls for many expressions of patriotism in deeds as well as words. How grandly the people have responded, the events of the last month tell. If long-continued peace found us unprepared to rush to arms fully equipped in all that constitutes a well-appointed army; if, in mustering into active field service the volunteer soldiery, there should occur some mistakes, they must be attributed to the rapidity of the movement rather than to other causes. Faults must inevitably become apparent; some of omission, others of commission. Time and experience will disclose the one and remedy the other, and the active and enthusiastic ready intellect of our people will supply deficiencies, suggest improvements, and find a remedy for all evils.

Where all are working, the medical profession is not the least active. In many ways our profession becomes a leading element in the activity around us. Our province is beneficent; and under the direction of well-chosen members of our profession, preparations are being made to meet all the requirements which a long and severe campaign may demand.

A Medical Association for the supply of lint, bandages, and all needed surgical and hospital stores, has been organized in this city under proper officers; and throughout the country, in almost every town and city, societies having similar objects have been instituted.

It is proposed, also, to prepare suitable female nurses, to administer to the wants of the sick and wounded of our volunteer soldiery. Already several hundred of our kind and generous-hearted women, emulating the example of Florence Nightingale, have volunteered their

services. A Board of Management has been appointed to select from these only such as are best fitted for the duty, and the hospitals of our city have united in affording them every facility to become practically acquainted with the duties which will be required of them, so that they may enter upon them in the most efficient manner.

In active field service there is always a deficiency of surgeons. The experience of the Crimea and the Italian Campaign was no exception to this rule. A full surgical corps is greatly to be desired, and an efficient ambulance corps gives confidence to soldiers. This is a necessity which will be carefully watched over and supplied. Most of the regiments leaving this city have been attended only by a surgeon and a surgeon's mate; quite sufficient when on a peace footing, but altogether inadequate to the labor devolving upon these officers at the time of an engagement. In many of the armies of Europe there is a surgeon to every hundred men, and such should be at least the proportion here. The number of surgeons attached to a regiment being limited by law, many who are anxious to serve their country will have to wait until there is a crying demand for them. In the mean time, however, they too are preparing to act with more efficacy. To this end, in order to familiarize those who propose to enter into this service with some of the details requisite in the camp, instruction on military surgery is given in most of our large cities. In this city, Prof. Hamilton, at Bellevue Hospital, and in Boston, Prof. Bigelow, have commenced courses of lectures, with demonstrations, the lectures being free to all. Such as desire can avail themselves of the opportunity of performing on the dead body all the operations belonging to military surgery. These courses are most fully attended. The benefit of them will be felt by our soldiers. They will be attended by men who have prepared themselves for the emergency.

—The Academy of Medicine has devoted the greater portion of several of its later sittings to the consideration of the subject of morbus coxarius. The Section on Surgery had previously discussed the subject at great length, and had recommended it to the Academy. Dr. A. C. Post opened the discussion, by giving a concise history of the pathology and treatment of hip disease. He was followed by Drs. Batchelder, Buck, Sayre, Wood, Parker, Raphael, Krakowitzer, Bronson and others, and by invitation, Drs. Bauer and Davis, who were present, participated in the discussion. Little was said that was novel as regards the pathology of the disease, but the mechanical treatment, brought to such a degree of perfection by the surgeons of this city, was minutely explained, thoroughly criticised, and universally

commended. The principle upon which the mechanical treatment is based is the separation of the impinging surfaces of diseased bones by means of carefully-applied splints, producing extension and counter-extension, and admitting of motion of the joint. This treatment has been the gradual growth of years. As early as 1835, Dr. Harris, of Philadelphia, is said to have applied extension and counter-extension by means of Gibson's modification of Physic's long splint, with success in four cases. A report of these cases was made early in 1839, but, as Dr. March states in his paper on *morbus coxarius*, "without giving any explanation of the theory or principles upon which the practice is founded." Later, the treatment was proposed by Dr. March, of Albany, as an entirely new treatment. He found he had been anticipated by Dr. Harris. Dr. March, however, explained in his paper just referred to, which was read before the American Medical Association, and printed in the Transactions of that body for 1853, the theory of the treatment. "*The most important part of the treatment,*" says Dr. March, "*consists in the keeping of the joint in a perfect state of repose.*" This is accomplished by a splint. "Extension and counter-extension are used with a view to prevent *undue pressure* on the delicate and tender surfaces of the diseased bones." "In the advanced stage of the disease," continues Dr. March, "the cartilages of the acetabulum and of the head of the bone are destroyed; the carious and loose spongy tissue is covered with coagulated lymph, and this, adhering to the surface of the bones, becomes highly vascular. Now if these two surfaces, thus covered with *organized* or *organizable* matter, could be kept in easy apposition and at rest—without too much pressure on the one hand, and on the other without exerting too much separating or sundering force—in many instances a bony ankylosis would be the result."

This is the first record we have of the mechanical treatment formulated upon known pathological conditions. But Dr. March does not seem to have proposed it for other than the latter stages of the disease; for, in the early stage, he says "it will be important to resort to the use of the long splint, to maintain the joint in a state of rest, that the inflammation may subside;" while extension and counter-extension, it appears, were used by him in the advanced stages, to prevent the deformity of the limb.

Next in order to Dr. March is the treatment proposed by Dr. Bauer, of Brooklyn, by means of an apparatus similar to the *double gouttière* of Bonnet, of Lyons, having, however, attached to it a foot-piece allowing of extension. This apparatus is made of wire, and has been dubbed with the *sobriquet* of the "wire breeches." This appa-

ratus keeps the limbs immovable, and permits the patient to be carried about.

In April, 1860, Dr. H. G. Davis described in this journal a method of treating hip disease he had employed for many years. The principle upon which his treatment was founded was the application, by means of a corrugated steel splint, of extension and counter-extension, permitting at the same time the patient to take active exercise in the open air.

For the steps of the treatment and an explanation of the splint used, we refer to Dr. Davis' paper in the MONTHLY for April, 1860. In this instrument is combined all the suggestions made by Drs. Harris and March, with the addition of *elastic* extension applied in all stages of the disease, not for the sole purpose of preventing or overcoming a deformity, but as a curative means, and with that freedom of action to the patient wearing the splint which permitted him to take exercise and air, so important to the general health. This was attempted to be accomplished in a measure by Bauer's wire breeches, but is positively accomplished by the Davis plan of treatment. The report of the Section on Surgery, and the remarks made by most of the surgeons who participated in the discussion at the Academy, gave Dr. Davis the credit of having introduced the methodical plan of treatment to the profession.

To the steel splint of Dr. Davis several modifications have been made by Dr. Sayre, Dr. Davis himself, and others.

Dr. Sayre differs from most of the profession in his views of the etiology of the disease. He holds that, with few exceptions, the disordered action of the joint can be traced to direct traumatic influences, and not to a strumous origin, as is the almost universal opinion. He believes that the effects have been mistaken for the causes; the scrofulous cachexia being consecutively developed, and therefore being the results, and not the causes, of the disease. In these views he is sustained by Dr. Bauer, of Brooklyn.

— We have to notice with deep regret the death of a valued contributor, Dr. E. J. Fountain, of Davenport, Iowa, whose communications to medical science in the pages of this and other journals of the country during the last few years, have made his name familiar to all.

Dr. Fountain was a native of this State. He was born in Westchester County, was graduated at Princeton College in 1847, and at the College of Physicians and Surgeons in this city in 1851. He was for some time one of the surgeons to the Panama Railroad Company. In 1854 he went to Davenport, Iowa, where he died on Friday, the 29th of March. The *Chicago Tribune*, in mentioning his death, gives the following account of the circumstances:

For some time past Dr. Fountain had been continuing, at the suggestion of the American Medical Association, his researches upon the properties of chlorate of potassa as a remedy in phthisis, taking the ground that the article when pure was almost entirely harmless in large doses. Under this conviction, he took upon several occasions doses of half an ounce, and on Friday, at 10 A. M., he took one ounce dissolved in a pint of water. No serious symptoms occurred through the day, except a profuse diuresis and discoloration of the superficial circulation, and he visited his patients as usual. Having eaten a hearty supper in the evening, he returned to his house, where he was shortly after seized with severe pain in the abdomen, and so greatly prostrated as to be unable for some time to call assistance, (being alone in the house, his wife being absent at the East.) He expected to die in this condition, but by a desperate effort, succeeded finally in calling his neighbors, who sent for his partner, Dr. Adler. His symptoms were after a time partially relieved, but soon he was seized with vomiting, ejecting a dark-colored, greenish fluid, being unable to retain any nourishment; the secretion of the kidneys was also entirely suppressed. This condition continued, with a gradual increasing prostration of the system, (the mind being perfectly clear,) for seven days.

The post-mortem examination revealed extensive inflammation and disorganization along the whole course of the intestinal canal, with adhesions agglutinating nearly the whole of the abdominal viscera; the gall-bladder distended with a thick dark-colored fluid; the kidneys enlarged and lobulated externally, the internal surface and substance engorged, and the uriniferous tubes distended, containing frequent points of a crystalline substance, which was, without doubt, chlorate of potassa; and the bladder entirely empty, contracted and inflamed.

As a full statement of the case will be published, it is unnecessary for us to dwell further upon it.

In the death of Dr. Fountain, the profession in the Northwest has lost one who was destined to prove one of its brightest ornaments, and the community in which he lived, one of its most valuable citizens.

— The translation of "Scanzoni on Diseases of Females," by Prof. A. K. Gardner, announced by us a few months since, has been recently issued. It is a beautifully-printed and finely-illustrated volume, of nearly 700 pages. The work of the translator has not been solely confined to the conversion of the text of this volume into English. Numerous judicious annotations have been made throughout the book. We shall at another time give an extended notice of this volume. The publisher, Mr. R. M. De Witt, of this city, deserves the thanks of the profession for issuing the work in so readable a type and on such excellent paper.

— The Lectures of Dr. Thomas, one of which appears in this number of the MONTHLY, have been received with great favor by the medical press in this country and abroad. We learn from a friend who was in Germany during the last summer, that one of them has received the honor of a translation and separate publication in pamphlet form.

THE AMERICAN MEDICAL MONTHLY AND NEW YORK REVIEW.

JUNE, 1861.

ESSAYS, MONOGRAPHS, AND CASES.

Report on the Clinic for Diseases of Children, held in the New York Medical College, Session 1860-61. By A. JACOBI, M.D., Professor of Infantile Pathology and Therapeutics.

When, in the autumn of 1860, the Faculty of the New York Medical College was reorganized, it was thought proper to teach several branches of medical science separately. Infantile pathology and therapeutics was determined upon to form a distinct part of medical instruction, and a special chair was established for that purpose. The large number of infantile patients in general practice, the difficulty of diagnosing their diseases, the importance of physical diagnosis and close observation applied to their ailments, the modification of physiological, and therefore pathological actions and symptoms, in early life, the care necessary in selecting the remedies and determining their doses in diseases of infancy and childhood, the occurrence of a number of diseases exclusively, or almost so, peculiar to early life, appeared to render this course exceedingly proper. As a special study of infantile diseases has been generally acknowledged to be a necessity, the pro-

fession, in my opinion, has the right of, as well as interest in, knowing in what manner and to what extent the proposed aim has been reached.

The following report will show that the poor of this city and neighboring places have not been slow in recognizing the help offered them. A large number of neglected or obstinate cases were brought to the new institution, some from great distances, to be relieved or cured, and a number of others that had been given up as hopeless were presented for the purpose of obtaining a final opinion. Thus the students of the college have had the opportunity of seeing infantile diseases to a considerable extent; the more so, as particular care was taken to accustom them to diagnosis and selection of remedies. Every single case that was presented in the two clinical hours a week, was given in charge of a member of the advanced class, who had to examine, report, and prescribe, before any remarks were made by the teacher. Then, at last, the case was commented upon for its own merits, by comparison with general experience, and with reference to the theoretical lectures; thus affording, if not a universal knowledge of every disease, the means of learning and exercising a universal scientific method. I am pleased to say that the attention and regular attendance of the class, and their eagerness to visit a number of patients at their homes, have afforded abundant proof of their appreciation of the opportunities offered.

I intend in this paper to pass in review the cases presented as briefly as possible. Such remarks as had to be made during the course, I expect to condense and treat of separately at the end of this report. I intend by this means to express in separate articles my opinions as given in a number of clinical lectures, particularly on subjects concerning therapeutics; selecting, for instance, the use of depletion, mercurials, anti-febriles, narcotics, etc., in diseases of the infantile age. Thus I hope both to serve my pupils and to elicit the always welcome criticism of the medical profession.

Of the reported cases, all such as either terminated fatally or were not watched to their final recovery, will be mentioned; those in which no report to the contrary is given, got well, or were improved.

1. Solomon M., æt. 2 years. *Lobular pneumonia* of left upper lobe, after measles. Percussion dull over left upper lobe, anteriorly, mucous râles on the same side; respiration more or less vesicular on right side. The exudation absorbing, and the child being anæmic and with a frequent and small pulse from no local acute disease, the treatment consisted of sulph. cinch., \mathfrak{Dj} ; div. in p. iii., a powder every morning, and nutritious diet. The same treatment was continued for three

more days, and followed by syr. iodid. of iron, ten drops three times a day, in a tea-spoonful of ol. morrh. No new exudation took place in the lungs, and the child recovered in about a month.

2. Catharine K., æt. 6 years. *Anæmia*; excoriations at the introitus vaginæ. Is reported to have, in regular monthly intervals, a copious leucorrhœal discharge for several days. Ordered to return at the time of the next discharge, and meanwhile to take pulv. ferri., gr. j., three times a day. Was presented after a fortnight, and reported no better. The same sallow, oedematous appearance, the same listlessness; none of her discharges. The same treatment continued, as was the recommendation of nutritious diet, fresh air and cold water, the want of which is deemed the only cause of the patient's anæmic condition. She looked decidedly better a fortnight afterwards, was stronger and more lively, and had a good appetite. No discharge. All the outward symptoms had disappeared eight weeks after her being presented for the first time.

3. William H. T., æt. 1 year, 4 months. *Scrofulous diathesis* from birth. *Stomatitis, pneumonia* left upper and right middle lobes, anteriorly. *Enlargement of liver*. Father is believed to have been syphilitic. Both parents dead. Child lives in bad circumstances, and looks emaciated and poor. No muscular power, no fat. Extreme dyspnœa. Respiration hurried; meteorismus; external veins of thorax, abdomen and head very much injected. Dull percussion sound anteriorly over left upper and middle right lobes; mucous râles all over both lungs. Submaxillary and cervical-glands swelled; some suppurating. Pulse, 120; respiration, 60. Treatment: Fresh air, beef and milk. R.—Sulph. cinch., ðj., div. in p. iii. D. S.: A powder every morning. Presented in about the same condition, after a week; part of the remedy not yet taken, as the druggist had told the attendant it was enough to kill two grown men. The same treatment again ordered. After three days the symptoms less severe; hepatization still in left upper lobe. Smaller doses of cinch. given; the child continued to get better until a new fever set in about a week afterwards. No new physical symptoms found, but as the pulse was again 144, and respiration 44, and a new attack of pneumonia dreaded, R.—Hydrarg. submur., oxysulph. antimon., ää. gr. vj., div. in p. æq. xii. D. S.: a powder every two hours. At the same time a daily dose of sulph. cinch., gr. vj. $\frac{2}{3}$, and recommended to go to the country. Patient presented after four weeks, well, hearty, and stout. No pulmonary or hepatic symptoms; ulcerations around the neck closing; appetite good. Nobody able to recognize our former patient. Ol. morrhuæ.

4. Wolf St., æt. 7 months. *Ulcerations* of the folds of the neck, with much loss of substance, and *erythema* around anus; resulting from uncleanness and the free external use of starch-powder, which is the most frequent cause of simple erythema to be transformed into deep offensive ulcerations. Treatment: cold water instead of starch-powder; application to the ulcerations of R.—Sulph. cupri., Əj., aq. ʒviii. When presented after four days, the erythema round the anus was nearly gone, and the sores granulating and filling up rapidly. Perfect recovery after some weeks.

5. Elizabeth L., æt. 14 weeks. *Syphilis hereditaria, roseola syphilitica, rhagades ani et oris, ecthyma syphiliticum.* The mother has been syphilitic for four years, and is still under treatment. Roseolous eruption visible for the last fortnight, of pink color, round, irregular, confluent, from the scapulæ down to the lower extremities. Five or six ecthyma pustules on back and abdomen. Superficial rhagades of both angles of the mouth; deep ones round the anus. Treatment: submuriat. hydrarg., gr. $\frac{1}{6}$, three times a day; no external applications. A week afterwards the eruption commenced getting paler. The same treatment was continued for about ten weeks, the child gaining flesh and strength from week to week. About the end of this period the child contracted on three spots of the occiput, *tinea favosa*, the favus fungi appearing in large number under the microscope, and required some seven or eight cauterizations with either concentrated acetic acid, or nitrate of silver.

6—7. Two sons of the same mother, born before she was syphilitic, æt. 4 and 15 years. *Scrofula.* Enlargement of the submaxillary glands, upper lip, nose, belly, etc. Ol. morrh., $\frac{1}{2}$ table-spoonful three times a day.

8. Jane K., æt. 6 weeks. *Frenulum oblongatum*, to such an extent as to embarrass nursing. Treatment: incision.

9. Harry D., æt. 3 years, 6 months. *Bronchitis*, general, and with high fever. Oxysulph. antim., gr. ii., pulv. h. digital. gr. j., every two hours; 12 doses.

10. Jane D., æt. 9 months, sister of 9. *Bronchitis*, with the same symptoms. Oxysulph. antim., pulv. h. digital., ää., gr. ss., every two hours; 12 doses. Both were reported to be better three days afterwards. Then took oxysulph. antim. alone every three hours, and were brought back four days later, recovered.

11. Fred. D., æt. 10 months. *Catarrhus intestinalis.* Submur. hydrarg., gr. vj., pulv. Doveri, gr. iv., cret. præpar., ʒss., div. in p æq., No. xii. A powder every two hours.

12. Catharine W., æt. 6 years. *Pneumonia*, left upper lobe, anteriorly and posteriorly. Pharyngitis; sloughing of tonsils; foul breath; small glandular swellings around the neck. The girl had measles five months ago, and has been coughing ever since. Respiratory murmur tolerably normal over right lung; no dull percussion sound; occasionally a mucous râle. Lower lobe of left lung equally normal; over the upper lobe, left lung, dull percussion sound, and mucous râles in the bronchi; little action of the inspiratory muscles. As the hepatization appeared to be in a process of absorption, it was deemed advisable to leave it to itself and attend to the pharyngeal affection. The deep ulcerations on the tonsils, and the glandular swellings around the neck, small though they are now, arouse the suspicion of a diphtheritic affection having been present. Treatment: chlorat. potass., \mathfrak{zss} ., aq. \mathfrak{zvj} ., $\frac{1}{2}$ table-spoonful to be taken every two hours. Patient got better under this treatment; continued for a week, with nutritious diet. Took afterwards, for a week, tinct. muriat. ferri, 12 drops every four hours. Was presented again ten days later, three days after stopping taking medicine, with gastro-intestinal catarrh, apparently from indigestion. At this time no symptoms of pneumonia left.

13. Patrick McC., æt. 11 years. *Conjunctivitis trachomatosa*. Treatment: Solid. sulph. cupri, twice a week.

14. William S., æt. 1 year, 7 months. *Catarrhus intestinalis*. Mild case. Tinct. opii camphor., gtt. x., every two hours.

15. Henry V., æt. 11 years, 6 months. *Tuberculosis*, left upper lobe, anteriorly. Left subclavicular region sunk; dull percussion sound; respiratory murmur diminished; no mucous râles. Respiratory murmur increased on the opposite side. Patient emaciated and pale, thorax narrow. History very defective. No feverish disease known, but is reported to have coughed for the last six weeks only (?) Parents dead; father had consumption. Treatment: Ol. morrh. \mathfrak{zj} . daily. Gymnastic exercise, to enlarge the thorax and extend the lungs.

16. Lena M., æt. 1 year, 3 months. *Arterial nævus* on the forehead, half a square inch in size. By means of a small brush, the following cautery: R.—Hydrarg. bichlorid., \mathfrak{zj} ., collodii, \mathfrak{zj} ., was applied on October 2d, 5th, and 12th, with perfect success.

17. John M., æt. 4 years, 6 months. *Catarrhus laryngeus et bronchialis*. Croupy cough; mucous râles all over the thorax; moderate dyspnœa; coughing paroxysms in the night. As an expectorant, the following mixture was given: R.—Muriat. ammon., extr. glycyrrh. $\mathfrak{ää}$., \mathfrak{ziii} ., aq. \mathfrak{zvj} ., M. D. S., $\frac{1}{2}$ table-spoonful every two hours. Besides,

tinct. opii camph., $\frac{1}{2}$ tea-spoonful, was ordered to be taken every night. Reported to be well the following week.

18. F. N., æt. 1 year, 6 months. *Conjunctivitis scrofulosa, pannus corneæ of the left eye.* The boy is decidedly scrofulous; has glandular swellings around his neck, and is reported to have suffered from discharges from the nostrils and left external ear. Ol. morrh. internally, acetat. morph. in substance applied to the eye. The same treatment, although sometimes interrupted, was followed for several months, the more so as exudation took place on the right cornea also. Intercurring acute swellings of glands in front of the left ear were successfully treated with tinct. iod. externally. Another attack of external otitis, with copious and offensive discharge, was gradually diminished by injections of acid. tannic, ʒiss., aq. ʒvi., and the system generally improved by generous diet and the continued use of ol. morrh. ʒss. daily, and syr. iodid. ferri, 6-8 drops three times a day.

19. G. A. C., æt. 1 year, 6 months. *Eczema diffusum.* Eczematous eruptions in every state of development on several parts of the body; some being scarcely perceptible; some larger vesicles filled with a clear, transparent liquid; some with thick purulent matter; some dried up, and forming a thick, hard scab. Treatment: Bathing in soap and water twice a day. R.—Pulv. rad. rhei, gr. xviii.; oxysulphuret. antimon., gr. vi. Div. in p. æq. No. xii. D. S.: Two powders daily.

20. Lewis K., æt. 2 years, 9 months. *Imbecillitas.* The boy is reported to have been well developed up to his eleventh month, when he commenced walking. After this time he suffered from numerous attacks of convulsions, 12-20 a day, for a protracted period. What muscular action of the locomotive organs he had before he then lost, until he was nearly two years old. About this time he commenced again to walk, but is unable to speak. His head is pretty small in circumference, forehead low, eyes small, occiput proportionally large. The cranium feels very hard and solid to the touch, and over the region of the large fontanel no local impression, but a general depression of the surface is perceptible. The mother, who has bred children before this one, states that the pulsations in the fontanel have never been perceptible. The case, then, is considered as one of idiocy, resulting from premature ossification of the sutures and fontanels of the cranium, and given up, from a medical point of view, as hopeless, the prognosis being highly unfavorable; for either the child will remain idiotic for life, or will perish from any feverish disease that may occur.

The cranial abnormality, in its bearings on the mental condition of

the child, looks very much like the case reported by Schützenberger, in which the disease lasted about four years, before the continually increasing compression of the hard, compact, and eburneated cranium succeeded in effecting the death of the patient, who had endured all his life frequently repeated faintings, a long series of epileptic and tetanic attacks, abnormal irritability, mental weakness, and, at last, idiocy. Or like the cases reported by Baillarger, who observed three microcephalic idiots whom their mothers reported to have been born with their skulls perfectly closed and solid. Two other of her children, who were well developed, both physically and mentally, had their large fontanel open for a long while after birth. Similar facts he learned from another woman, who was mother of one microcephalic idiot, and of some other children of normal development. Vrolik knew an idiotic boy of seven years whose cranial sutures had entirely disappeared. Cruveilhier relates the case of an idiotic child of eighteen months, without any discernible sutures. Thus the human cranium, without any, or with prematurely closed sutures, is very much like that of animals, of which class a few varieties of apes are the only ones who have for a short while after birth small and rapidly ossifying fontanels. For this very reason Baillarger compares microcephalic idiots to animals, both from an anatomical and pathological point of view. Gratiolet does not even stop here, but asserts that there is a direct relation between the earlier or later ossification of the sutures, in the different races and types of mankind, and the height of their intellectual capacities. He states that the cranial sutures close later in Caucasians than in Negroes, and particularly that the coronal suture ossifies early in Negroes, late in Caucasians. For this reason a proportionally late ossification of the coronal suture seems, *ceteris paribus*, to be favorable to intellectual development. The high forehead also of the Caucasian, and the low one of the Negro type, are evidently depending on this physiological fact, although it may be stated that the synostosis of the sutures is not the only cause of cranial difference in the races; the various characters of the crania, as they are found in different types, being partially formed before the synostosis of the sutures is complete.*

Besides the probability of this boy remaining idiotic for life, there

* On the Etiological and Prognostic Importance of the Premature Closure of the Fontanels and Sutures of the Infantile Cranium, in *New York Journal of Medicine*, January, 1858, and in Noeggerath and Jacobi's Contributions to Midwifery and Diseases of Women and Children: New York, 1859.

is another possibility. I have found that, although premature ossification of the fontanel and sutures need not of itself absolutely and always produce congestion of the brain or its membranes, which often is the final cause of death in such cases, every child whose fontanel and cranial junctures have been prematurely closed, and who falls sick with symptoms of cerebral irritation or depression, is predestined to certain death. Condie, too, states that when the growth of the cranium ceases, while that of the brain continues, the morbid phenomena resulting from the compression of the brain, which invariably results, may certainly be to a certain extent abated, the comfort of the patient increased, and life prolonged by a proper hygienic course of treatment; but all hopes of effecting a cure must be abandoned. And I have further found, and proved by a number of cases of pneumonia, intermittent fever, etc., that in all cases of children, whose cranial junctures are prematurely ossified, any acute or febrile disease invading the system, slight though the acute intercurring affection may be, offers a most unfavorable prognosis. Thus, in our case, we scarcely know what prognosis is to be preferred, idiotism for life, or an early death.

21. William T. *Ulceration* at the point of insertion of the *frenulum of the tongue*, probably resulting from previous aphthæ. Repeated cauterizations with the solid nit. argent. proved satisfactory.

22. Charles S., æt. 1 year. *Syphilis hereditaria, roseola syphilitica, rhagades ani*. The father appears to have been, or is still, syphilitic; at least the mother impugns him with being the cause of the child's illness. The boy was under medical treatment a number of months ago, with apparently good result. But he again lost flesh, strength, and appetite, and showed the former symptoms, which the mother reports to have been of the same character as these. The treatment consisted of submur. hydrarg. gr. $\frac{1}{2}$ three times a day, for two months; that is, three weeks after all the secondary symptoms had disappeared. For a number of days the child suffered, in the mean time, from bronchial catarrh, independent of his specific disease, and then only the usual formula was changed for: R.—Submuriat. hydrarg., gr. iii.; oxysulph. antimon., gr. xvi.; sacch. alb., ℥ij.; div. in p. æq. No. xvj. D. S.: 3 powders daily.

23. John D., æt. 7 years. *Catarrhus Intestinalis*. The diarrhœa having lasted for some time already, and the abdomen generally appearing to be a little painful to the touch, we considered the case as one of consecutive irritation, rather than of real anatomical disturbance. Two drops of laudanum given every three or four hours,

proved sufficient to restore the boy to his general well-feeling, and to remove the serous secretion that still continued.

24. Raphael B., æt. 4 months. *Hydrocephaloid*. The boy has been suffering from a severe intestinal catarrh for a month; and is perfectly exhausted and emaciated. Extremities cold; head very hot; external veins of the cranium congested; large fontanel elevated, extended, and pulsating; scalp wet with perspiration; conjunctivæ injected; pupils contracted; the child moaning constantly; respiration hurried; pulse 140. Evidently the anæmia of the cerebral substance resulting from the general condition, had given way, *ex vacuo*, to hyperæmia, threatening exudation. Treatment: Generous diet; ice to the head; extremities to be kept warm; sulph. cinch., gr. i., acid tannic. gr. ss., four times a day. Injections with brandy into the rectum ordered after the temperature of the head had become diminished. The boy was presented several times during the next fortnight; decidedly not worse; the temperature of head and extremities more equal; excretions more normal, but was finally lost sight of. Depletion or any enfeebling remedial agent or method was carefully avoided.

25. Caroline I., æt. 5 months. *Catarrhus Bronchialis*. Is reported to have suffered from more dyspnœa and fever than when presented. No pulmonary infiltration; mucous râles only. No treatment. Reported to be well after seven days.

26. Julius D., æt. 2 years. *Pneumonia Bilateralis*. Dull percussion sound, and bronchial respiration in the subclavicular region, right side; subcrepitant râle over left lung, inferior lobe, posteriorly. Great dyspnœa; pulse 154; temperature of head high; child has vomited twice. Treatment: R.—Tinct. digitalis, ʒiii.; Syr. ipecac., ʒij. M. D. S., 20 drops every two hours. Three days afterwards, dull percussion sound still over both the affected lobes; mucous râles in the right lung. Syr. ipec. alone.

27. Eliza T., æt. 7 months. *Broncho-Pneumonia*, upper lobe, left lung. The greater part of the lung hepatized; mucous râles heard on several places; fever pretty high still, therefore it is thought proper to combine an anti-febrile with an expectorant. R.—Pulv. herb. digital., gr. xii.; acid. benzoic, gr. viii.; sacch. alb., ʒj. Div. in p. æq. xvj. A powder every two hours. Was not brought in before three weeks, when there was no fever nor dyspnœa, but dull percussion sound to some extent, and mucous râles. R.—Oxysulph. antimon., gr. viii.; sacch. alb., ʒij. Div. in p. æq. No. xvi.

28. William M., æt. 6 years. *Pleuritic Exudation and Splenization* of the left lung, upper lobe. Has suffered from measles nine

months ago, since then from otorrhœa and cough. No accurate history. Percussion and auscultation show normal results over the right lung and inferior lobe of the left, with the exception of the respiratory murmur on the right side being unusually puerile. Percussion sound over the diseased part exceedingly flat; respiratory murmur much diminished. Treatment: Gymnastics and cod-liver oil. Proper diet.

29. Isabella N., æt. 1 year and 6 months. *Contusion of Shoulder-Joint.* R.—Ol. Camphor.

30. John H., æt. 1 year and 6 months. *Pneumonia Chronica* of the right lung, upper lobe, *Hypertrophia Hepatis*. Has suffered from diarrhœa and cough for five months; is very much emaciated, and unable to stand on his feet. Limbs very thin; cheeks sunk; dyspnœa moderate; abdominal; abdomen enlarged; veins on thorax and abdomen much injected. Dull percussion sound in the subclavicular region, right side, and over the hepatic region up to the fourth rib, over the sternum, up to the heart. Treatment: Generous diet, cool air. Sulph. cinch., gr. v., every morning; Syrup. iodid. ferri, gtt. viii., three times a day, in a tea-spoonful of cod-liver oil. This treatment was continued for two months, (with the exception of cinch., which was given in but six doses,) until both physical symptoms and external appearance proved the boy to be well.

31. Henry H., æt. 9 months. *Pneumonia* of right lung, upper lobe. Hepatization; constipation. R.—Syr. Scillæ compos., 8 drops every two hours.

32. John V., æt. 6 years. *Pneumonia* of left lung, upper lobe. Subcrepitant râle; slight dullness; high fever; vomiting; moderate pain over the affected part. R.—Tinct. rad. aconiti, gtt. vj. every two hours. Was not presented before a week; the morbid process not changed as to place, but character; hepatization fully developed. Loss of appetite and strength perfect; pulse 136, small; respiration 36. Treatment: Wine, beef. R.—Sulph. cinch., gr. xv., div. in p. æq. No. ii. D. S.: A powder every morning. At the same time: R.—Acid. benzoic, ʒss.; Sacch. alb., ʒjss. Div. in p. æq. No. xxiv. D. S.: A powder every two hours. After three days, the general condition improved, absorption commencing in the hepatized tissue. The case then was left alone, with nutritious diet, and did well.

33. Ann B., æt. 8 months. *Catarrhus Gastricus*, from injurious food. Vomiting, furred tongue, foul breath. Occasionally an acid passage. No particular fever. R.—Bicarbon. sod., ʒjss.; Aq. ʒiii. M. D. S.: A tea-spoonful every two hours.

34. Rachel B., æt. 2 years. *Diphtheritis vaginalis*. Diphtheritic

membranes over the whole vaginal surface, ulcerated appearance of the tonsils, as if exudations had been already thrown off. Treatment: Liq. ferr. chloridi, gtt. viii. every 3 hours; local application of a saturated solution of chlorat. potass. in water, (1:16.)

35. James L. R., æt. 1 year and 1 month. *Œdema pedum ex anæmia*. The boy looks extremely anæmic, emaciated, and œdematous at the same time. Had scarlatina three months ago. Afterwards suffered for six weeks from an exceedingly severe diarrhœa and vomiting. Diagnosis: Hydrops ex scarlatina. Under this impression, the boy was ordered to take, besides nutritious food, tannic acid, gr. ii. 3 times a day. After three days worse. Meanwhile the urine had been examined, and was found to contain neither albumen, nor blood, nor casts. The diagnosis was then changed as above: R.—Ferri pulv. ðj.; pulv. Doveri, gr. vj.; sacch. alb., ðij. M.—Div. in p. æq. No. xx. D. S.: 3 powders a day. No decided improvement took place before three weeks, the œdematous swelling meanwhile increasing.

36. R. K., æt. 8 months. *Pneumonia* of left lung, lower lobe; hepatization; absorption commencing. R.—Oxysulph. antimon., gr. viii.; Sacch. alb., ðii., m. f. pulv. Div. in p. æq., No. xvi. D. S.: A powder every two hours.

37. R. T. H., æt. 11 years. *Febris Intermittens Quotidiana*. Attacks daily, although intermittent fever at this age will more frequently show the tertian type of adult age. No enlargement of spleen or liver. General health good. R.—Sulph. cinch., gr. x. two hours before the next attack. Reported well a week afterwards. The same dose ordered once more.

38. Mary K., æt. 5 months. *Eczema Capitis et Faciei*. Scalp and face partially covered with thick scabs; purulent matter contained in a number of pustules; a transparent liquid in others just formed. This case shows exceedingly well the absence of any intrinsic difference between eczema and impetigo, the vesicles being evidently, by a gradual change taking place in their contents, transformed into pustules. The child has suffered from diarrhœa for two months, and is still pale, and fontanelles a little sunk. Therefore, in this case, some care is taken not to suppress the secretion at the scalp suddenly. As a general rule, in very young children, an eruption complicated with a large amount of secretion going on for some length of time, especially on the scalp, must not be suppressed at once, although its cautious removal will not bring on the dangers attributed to it by the public prejudice. Treatment: R.—Liq. potass. caust., ℥ii.; Ol. morrh., ℥ii. To be applied twice a day over one-half of the diseased surface. The

scabs were mostly removed after a week, when application of Goulard's wash was resorted to, and the same proceeding commenced with on the remaining half. Some eruption and secretion took place a number of weeks afterwards, as it will generally do at this age; but it was treated in the same manner, and never reached any considerable extent.

39. James R., æt. 1 year and 5 months. *Erythema et ulcera colli*. Deep ulcerations in the folds of the neck, the result of carefully abstaining from Croton water, and adding "powder" and sweet oil to a simple erythema. Treatment: Croton water, and R.—Argent. nitrat., gr. v., adipis suilli, ʒj.; M. f. ung., to be applied three times a day. Wounds granulating well after a week. Then local applications of R.—Sulph. cupri., ʒj.; aq., ʒviii.

40. Robert D., æt. 1 year and 11 months. *Strabismus convergens*, left eye. Operation recommended.

41. Caroline C., æt. 1 year and 6 months. *Catarrhus Vaginæ*. Purulent secretion from the vagina for several weeks, from unknown cause. No dysuria. Erythema on and around the perineum. Aq. plumb. externally.

42. Thomas M., æt. 2 years. *Pharyngitis. Adenitis submaxillaris*. Tonsils swelled, the mucous membrane of the velum palati and the posterior wall of the fauces injected; submaxillary glands tumefied; pulse 110. No membranes found. R.—Chlorat. potass., ʒij; aq., ʒiv. M. D. S., half a table-spoonful every two hours.

43. John S., æt. 4 years. *Ulcera colli*. Ulceration of the left side of the neck, of the size of a square inch. Has been observed for five weeks past, and appears, according to the relation of the mother, to be the result of neglected furuncles. Treatment: R.—Sulph. cupri., gr. xv.; aq., ʒv. D. S., for external use. Granulations exhibited themselves very soon, and the sore was healed up in about a fortnight.

44. M. K., æt. 5 years. *Bronchitis*. Fever already less, mucous râles commencing to be audible. R.—Oxysulphur. antimon., gr. viij.; sacch. alb., ʒij. M. f. pulv. div. in p. æq., No. xvj. D. S., a powder every two hours.

45. Jane K., æt. 3 years. *Eczema Capitis, Faciei et Colli*. Eczematous eruption in every possible form on scalp, face, and neck. Isolated pustules have been formed wherever a drop of the secretion has come in contact with the healthy skin. The glands of the neck slightly tumefied, general appearance of the child scrofulous. Treatment: Ol. morrhuae. The scurf to be removed by means of warm oil and soap, and afterwards, to be applied three times a day: R.—Acid. tannic,

3jss; adip. suilli, 3jss. M. f. ung. Presented again eleven days afterwards; getting better. The same treatment continued.

46. Joseph B., æt. 8 years. *Vulnus Capitis*. Fresh cut wound on forehead. Suture.

47. John P., æt. 1 year and 7 months. *Catarrhus Intestinalis*. Diarrhœa has continued for a week, of a mucous character. No fever, a little tenesmus, number of passages from five to eight. R.—Opîi, gr. ss.; carbon. calcar., 3ss. M. f. pulv. div. in p. æq., No. xii. D. S., a powder every three hours.

48. Johanna L., æt. 11 years. *Adenitis Scrofulosa, Eczema Capitis*. The girl is reported to have been perfectly well until four years ago, when she suffered from malignant scarlet fever. Her system appears to have been thoroughly affected, and since that time symptoms of scrofula made their first appearance; cheeks bloated, upper lip and nose thick, submaxillary and cervical glands considerably enlarged, eczematous eruption all over the scalp for more than a year. No other members of the family scrofulous. As in this patient the cause of the scrofulous symptoms is certainly of a general deep-seated nature, having been brought on by the intense general affection produced by scarlatina, it was resolved upon to resort to a general treatment before applying astringents externally. R.—Syr. ferr. iodid., gtt. xii., in half a table-spoonful of cod-liver oil, three times a day; animal diet, avoiding of amylaceous food; and soap and water twice a day, besides general baths.

49. Thomas B. *Eczema Diffusum*. A number of eczematous pustules dispersed over the surface, particularly of the lower extremities, probably the result of uncleanness only. Ordered to bathe in soap and water daily. No pustules a fortnight afterwards.

50. Mary S., æt. 3 years and 6 months. *Hernia Inguinalis Sinistra, Pleuro-Pneumonia Chronica, Pharyngitis Acuta*. The hernia in the left inguinal region was first observed when the child was three months old. As no appropriate treatment was resorted to, it will still protrude during an attack of coughing. Truss ordered. Considerable enlargement of tonsils and uvula, and acute swelling of pharynx generally; fever moderate; constant cough, especially when lying down, probably increased by the irritation produced on the posterior wall of the fauces by the enlarged uvula. R.—Chlorat. potass., 3iij.; aq., 3vj. M. D. S., half a table-spoonful every two hours; pulv. Doveri, gr. iiss. at bedtime. Acute pharyngitis well after a week, but enlargement of tonsils, and particularly the uvula, still considerable. Coughing spells not frequent, but a short annoying cough after lying down.

Part of the uvula removed, with good result as to the nightly attacks of coughing, and the old pulmonary complaint attended to. The child had measles several years ago, and has been exposed since to a number of pulmonary complaints of either catarrhal or inflammatory character; has coughed almost constantly, and often suffered from attacks of dyspnœa. Respiration somewhat abdominal, circumference of the right half of the thorax less than the left, while the normal condition is the reverse. Right subclavicular region a little depressed, and little action of inspiratory muscles visible over it. Dull percussion sound over the upper lobe of right lung, both anteriorly and posteriorly; respiratory murmur bronchial, audible as it were at a distance. Diagnosis: Pleuritic exudation and (or only) induration of pulmonary tissue, being the result of one or more attacks of pleuro-pneumonia during, or (and) after measles some years ago; as some fever was still perceptible, sulph. cinch. was given for several days, in a daily dose of gr. vj., and a dose of pulv. Dov., gr. iij., was still ordered for some more nights; to be discontinued after several days, and replaced by syr. ferri iodid., gtt. x., three times a day, in half table-spoonful of cod-liver oil; gymnastic exercise to dilate the thorax, nutritious diet. The child gained flesh and strength during the following months, although the physical symptoms of pulmonary disease were never entirely removed.

51. Mary S., æt. 2 years, 6 months. *Synovitis Chronica Genu Dextri*. Right knee considerably swollen, the circumference being twelve inches; leg inflected; little spontaneous, not much forcible motion; not much pain on pressure, but fluctuation or rather elasticity perceptible, showing a large amount of liquid to be inclosed by the synovial membranes. No particular symptoms of scrofula perceptible; no knowledge of a traumatic injury. The assumption of the latter having taken place is more probable than the former, as there are no symptoms of general disease. The child has always been under treatment, tinct. iodine and vesicatories having been applied to some extent. Treatment: Compression of the knee by means of a bandage. A week afterwards circumference of the knee ten inches. Prescription wanted for some internal medicine, and refused. Patient not presented again.

52. Robert S., æt. 6 years. *Craniosclerosis Rhachitica*. Patient is the son of apparently healthy parents, but his brothers and sisters, of whom there are four, are all more or less rachitic. Developed very slowly while an infant; was late in teething; his limbs somewhat bent in the direction of the flexor muscles, and the epiphyses very much thickened on both radii and tibiæ. His intellect is reported

to have been bright during the first two years, but then commenced to diminish. His eyes are deep-seated and small; the expression of his face dull; his intellect of a very low character; his locomotion clumsy. He is unable to articulate, and the only intellectual power that is left is evinced by his doing mischief. His forehead is large, root of nose thick, circumference of cranium 22 inches; occiput normal, and small in proportion to forehead. Cranium feels very hard and solid to the touch, and its anterior portions are evidently thicker and heavier than normal. Defecation and emission of urine not frequent, but will occur without the patient troubling himself about them. All the other vegetative functions in perfect order. The case must be taken as one of a general nature, the result of vicious general development, and its first origin must be traced back to early infancy. In the first years, when general symptoms of rachitis showed themselves, the bones were soft, succulent, and full of blood-vessels, and the cranium and cerebrum like the rest; whether, however, rhachitic softening of the cranial bones, craniotabes, has really been present, cannot be determined upon; at all events, the bones of the posterior part of the cranium, in which craniotabes is always seen, appear more normal than the rest. After the period of rhachitic, spongy thickening, and consequent mollification, osteoporosis was followed by the stage of rhachitic eburneation. During this period the peculiar osseous cells became more numerous, the layers of the osseous tissue that separated from each other during mollification filling up with them, and the canaliculi got thinner. In the physiological condition, the inner lamina of the bones is said to stop vegetating after the tenth year; and the dura mater does not form new layers before the regressive period of cerebral development takes its commencement, in advanced years. After the fiftieth or sixtieth year of life, absorption begins to lose in power, the brain gets smaller, the veins narrower, arteries wider. If this development takes place in early life, the case is like that before us, without injury to the cerebral functions when the external layer only is affected, but with decided troubles of the cerebral functions, resulting in spasms, neuralgias, paralysis, or idiotism, when the process takes place on the inner lamina.

The case before us is well illustrated by the investigations laid down by Prof. Huschke, of Jena, in his last work on "*Craniosclerosis Totalis Rhachitica*." Undoubtedly this case does not compare in importance with that published by Prof. H., but the best-developed cases will always do most in illustrating the whole class.

The case of *total* osteosclerosis described by H. is that of a girl

of seventeen years of age, whose skull (the normal weight being 600 grammes) weighed as much as 4,117 grammes. The microscope showed that the medullary (Havers') canaliculi were large, and very numerous on the surface, narrow and very few in the interior of the sclerotic bones, and that the osseous canaliculi were more spherical and irregular in site and shape. The chemical composition was also abnormal, the constituents being phosphate of lime, 65.59; carbonate of lime, 11.12; sulphate of magnesia, 1.14; cartilage, very little fat, etc., 22.15. No fluorate of lime was found. After all, the bones, taken as a whole, proved exceedingly solid, but fragile; when tried in small pieces, very white in their interior, but yellowish on their surface; the latter color being the relic of extravasated blood or other pigmentous matter. Another skull, in the possession of the author, and apparently only in the beginning of sclerotic development, weighed, inferior maxilla excluded, 1,075 grammes; and a third, in the museum of the University of Jena, of the same description, is that of a young baboon, in which all the bones covering the hemispheres had undergone the sclerotic anomaly.

The superior half of the skeleton, in the physiological state, exceeds the inferior half by a greater amount of calcaria. But this prevalence is not only absolute, but also relative, the single bones containing a larger average proportion of earths in general, and lime in particular. There is also a physiological craniosclerosis in families as well as nations; the thickest and hardest skulls being found in African negroes, whose crania, although they be not absolutely heavier than Caucasian ones, undoubtedly have a greater weight in relation to the size of the cranial cavity. Further, the crania of the flesh-eating negroes of Guinea are much harder and heavier than those of Persians and Hindoos. Moreover, it is altogether noteworthy, that the human organism in Africa is throughout prominent for the exceedingly strong development of the substances and organs taking the lowest place in human chemistry and physiology, viz., bone, fat, and sexual organs, etc. Of undoubted morbid total craniosclerosis, there are only ten cases: those of Malpighi, 1697; Cuvier, 1822; Ribalt, 1828; G. Forster and Bojanus, 1826; Ilg, 1822; Kilian, 1822; Otto, 1822; Vrolik, 1848; Albers, 1851; Huschke, 1858. The disease does not affect the auditory bones, the condyles of maxillary and occipital bones, and the styloid process of the temporal bone. There are some symptoms of the disease in the posterior part of the cranium and basis cranii, but most affected are the bones of the face, and the frontal, parietal, and cribriform bones. Thus the disease takes its origin in the anterior portion

of the skull, particularly in the superior maxilla, and proceeds upwards and backwards, terminating in the basis cranii, in the neighborhood of the infundibulum and appendices. Two observers have been so fortunate as to meet with the preceding disease in the living. The average amount of earthy matter is very considerable in all of them. While the normal proportion of earthy matter to organic substance in cranial bones has been found by Professor Frerichs to be = 2.1 (or 1.5) : 1—it is in the sclerotic bones from 3.5 to 4.4 : 1. Generally, the carbonate of lime is reported to have been found increased, which proved to be the like in spongy bones. All the cases were those of juvenile individuals, or at least the disease had commenced in childhood.

The conditions necessary to the development of cranio-hyperostosis are, first, abundance of lime; secondly, congestion, and sometimes chronic inflammation. It is a characteristic fact, that the bones, the development of which is the quickest after birth, show the greatest disposition to hyperostosis, as the maxillary and cranial bones. Abundance of lime may be produced by such food as meat. One of the patients is reported to have been a very hearty eater. Or, as was the case in Huschke's individual, there is little excretion of lime by the urine. Or there is a metastasis of lime in such a manner that lime is resorbed in certain other places, and introduced into the substance of the cranium. Probably a number of cases co-operate for the same effect. But, at all events, it must be borne in mind, that the pathological process, great though the anomaly may be, is in a majority of cases to be explained by, and to be considered as, an extravagance of normal physiological development.*

As to our case, mild though it be in proportion to those on which Prof. Huschke has written in his excellent monograph, its prognosis is very unfavorable. The pressure on the cerebral substance cannot be relieved by any medicinal treatment.

53. John L., æt. 1 year, 6 months, *Ulcers Colli*. Half a dozen of sinuous ulcerations, of from two lines to an inch in length, around the neck, reported unchanged for several months. No intelligible account is given of their origin, but probably they are the result of plasters and scabs covering a few eczematous pustules, forcing the secretion into the subcutaneous tissue. In order to remove the loose flaps of skin which could not be expected ever to adhere again, they

* Review of Prof. E. Huschke on *Cranioclerosis Totalis Rhachetica* and Thickened Skulls in general, "with New Observations of that disease. Jena, 1858, pp. 54," and in Noeggerath and Jacobi's Contributions, etc., p. 406.

were repeatedly and deeply cauterized with solid nitrate of silver, and afterwards the whole surface treated twice a week with light and superficial cauterizations of the same kind. At last, for some weeks, application three times a day of: *R.*—Niträt. argenti. gr. x.; adip. suill. 3ii. m. f. ung. Granulations formed gradually, and the case turned out well, without leaving a cicatrix except on the spot of the largest ulceration.

54. Mary G., æt. 1 year, 1 month, *Ulcus Frontis*. The child was hurt by a fall four weeks previously. The wound had been maltreated with salves and plasters until a space of a little more than a square inch was in a fair way of ulceration. The surrounding parts, the right side of forehead, was swelled and erythematous, and a little sensitive to the touch. Treatment: Water dressing for three days. After the irritation around the ulceration had subsided, application of: *R.*—Zinc. oxyd. alb., 3ss.; adip. suill. 3iii.; a small portion to be applied three times a day.

55. Mary F., æt. 1 year. *Kophsis Nervosa*. Patient is reported to have been a healthy child with the exception of some eruptive fevers, and a small number of attacks of convulsions in early infancy, up to her sixth year. A year ago she appears to have been severely ill, and to have suffered from tonic convulsions ("lock-jaw") for several days, with unconsciousness. She is reported to have recovered very slowly, but to have showed no symptoms of disease except absolute deafness for the last six months. No contractions, no paralysis, pupils normal and equal. On either side external ear normal; tympanum plainly visible, and quite normal; eustachian tube easily entered by the sound. Thus the deafness must be explained by the cerebral disease that had taken place a year ago. Being unable to distinguish the peculiarities of that affection from the poor report given by the mother, it is probably safe to conclude, from the slow and gradual recovery during the first half year, that the disease was one of inflammatory and exudative character; the exudation, of whatever nature it may have been, undergoing a process of gradual retrograde metamorphosis and absorption. Further, from the deafness being unaffected during the last half year, and all the other functions being perfectly normal, it is just as safe to conclude, that the origin of the auditory nerve is still paralyzed by an unabsorbed part of that exudation. Thus, the prognosis is a very unfavorable one, unless absorption may be induced by remedial agents, which is improbable. Treatment: Iodid. potassii, gr. x., dissolved in water, daily. Patient not presented again.

56. John E., æt. 2 years. *Catarrhus Bronchialis*. Expectoration

not so free as desirable, as the cough appears to be hard and a little painful. R.—Muriat. ammon., extr. glycyrrhыз. ää, ʒii.; aq. ʒiv., M. D. S.: A tea-spoonful every two hours.

57. Johanna R., æt. 8 years. *Adenitis Chronica*. A number of submaxillary glands and the surrounding tissue swelled and indurated for four weeks. No scrofula. Appears to have had a glandular inflammation of an acute character; no pain; no fever. Treatment: R.—Iodid. potassii, ʒii.; glycerin, ʒss., for external use. This formula has always been preferred to the commonly used salve, as its ready absorption is proved by well-conducted experiments, which cannot be said of the old preparation. Further: R.—Iodid. potassii, ʒii.; aq., ʒivss., M. D. S.: A tea-spoonful three times a day.

58. Henry H., æt. 1 year. *Scrofula, Conjunctivitis et Keratitis Exudativa, Catarrhus Meatus Auditorii Externi*. The general symptoms of scrofula well developed, although the child is but a year old; father said to be consumptive. The inflammation of the cornea has resulted in an organized exudation over the right pupil; both of the external ears discharging freely a whitish purulent matter; no affection of the tympanum. Treatment: Four daily injections into the ears, after they have been cleansed by injecting water, of a solution of: R.—Acid tannic, ʒj.; aq., ʒvj. Application to the eye of acet. morph., gr. i-ii., repeated several times a week.

59. Katharine W., æt. 3 months. *Teleangiectasia Femoris Sinistri*. A sanguineous tumor of arterial nature, soft and protruding, but not pulsating, two inches long and an inch wide, on the inner side of the left femur, near the groin. In order to show several operative proceedings on this tumor, the lower two-thirds were covered with: R.—Tartar emetic, ʒij.; emplastr. sapon., ʒss. Deep pustules commenced to be formed in a few days, and the whole surface was covered with them a week after the first application. They then were allowed to heal up, and cicatrization to commence. The result was satisfactory, no return having taken place for five months. The remaining part was not attended to for the four months following the commencement of the treatment. After this period, an injection was made into the tumor, of a mixture of six drops of Squibb's liq. persulphat. ferri, and eighteen drops of water. Induration of tumor took place immediately, no inflammatory action being brought on, nor any inconvenience produced, but the proceeding had to be repeated before complete obstruction of the blood-vessels took place.

60. Frank L., æt. 4 years and 6 months. *Stomatitis Ulcerosa*. Tongue, cheeks, and soft palate covered with round superficial ulcer-

ations; pharynx injected and swollen; fetid exhalation. R.—Chlorat. potass., \mathfrak{zss} .; aq., \mathfrak{zviij} . M. D. S.: half a table-spoonful every two hours.

61. William B., æt. 7 years. *Abscessus Capitis*. Large abscess on the top of head, soft and fluctuating; incision. Bone not affected. Water dressing.

62. Mary McK., æt. 2 months. *Cephalhæmatoma*. Large elastic tumor, $1\frac{1}{2}$ inches high, $2\frac{1}{2}$ inches in diameter on the right parietal bone, limited by the coronal and lambdoidal sutures. Was observed on the second day after birth; has increased in size for several days, and then remained stationary. Osseous ring to be felt already; no pain; no discoloration of scalp; child well developed; reported to be treated without success; told that it will get well without treatment.

63. Joseph M., æt. 4 months. *Pneumonia Catarrhalis*, upper lobe of left lung. Patient commenced coughing and sneezing two months ago, and has coughed more or less ever since. A week ago had fever and dyspnœa, which still continues. Pulse 140, respiration 40–48. Mucous râles over the whole left lung; percussion slightly dull over upper lobe. Child emaciated, and not always able to take the breast. Large fontanel a little sunk, and extremities commencing to get cool. Treatment: Half an ounce of pale brandy a day, and R.—Acid benzoic., gr. viii.; sulphat. cinch., gr. iv.; sacch. alb., \mathfrak{Dii} . M. f. pulv. Div. in p. æq. No. xvi. D. S.: A powder every two hours. Both general condition and local symptoms improved after three days, and treatment continued, without brandy.

64. Eliza R., æt. 8 years. *Coryza Diphtheritica*. A year ago suffered from malignant scarlet fever, during and after which time there were large glandular swellings around the neck. At the same time, the nose was obstructed for a long period. Since which, she has had a mucous or viscid discharge from the nostrils, sometimes with an offensive smell. At present no glandular swellings; not even enlarged tonsils, but they look torn and cicatrized. Mucous membrane of the nostrils, as far as they can be examined without instruments, injected, livid, velvet-like. Treatment: Injections, four times a day, of R.—Zinci. sulphat. \mathfrak{Zii} ., aq. \mathfrak{Zvj} .

65. Francis McC., æt. 5 years. *Tuberculosis* of the right lung, upper lobe. Father died of tubercular phthisis; mother is well; patient is but poorly developed, small and emaciated, chest narrow, subclavicular region a little sunk, hepatic region prominent, and liver enlarged; had measles six months ago, and has been coughing and declining ever since. Dull percussion sound in right subclavicular region and

fossa supraspinata; respiratory murmur diminished, with slight mucous râles; puerile respiration on the left side. The diagnosis supported principally by the hereditary predisposition. Treatment: Generous diet, gymnastic exercise, cod liver oil; general condition apparently improved a month afterwards, but physical symptoms the same.

66. Herrman K., æt. 7 years. *Pneumonia*, right lung, upper lobe; hepatization, fever moderate, dyspnœa not exceedingly great. Dull percussion sound, bronchial respiration, no mucous râles. Treatment: R.—Oxysulphur. antimon., gr. xii.; sacch. alb., ðij. M. f. pulv. Div. in p. æq. No. xvj. D. S.: a powder every two hours. After three days: Dull percussion sound less extended; mucous râles; same treatment.

67. Elizabeth L., æt. 6 months. *Tinea favosa*. (cf. Case 5.) Repeated cauterization of the fungous deposits, with solid nitrate of silver; and later, concentrated acetic acid.

68. Eugene S., æt. 2 years. *Paralysis Essentialis, Catarrhus Intestinalis*. The lower extremities are almost entirely paralyzed, the extensor muscles apparently more so than the flexors. This paralysis was first noticed two months ago, without any premonitory symptoms. The child is reported to have been put to bed in its usual health, and unable to move the following morning. A number of such cases are recorded in literature, but a larger number have been reported as having been preceded by some feverish attack. Thus antecedent attacks of eclampsia, inflammatory diseases, eruptive or other fevers, have been observed to have been the ultimate causes of infantile paralysis. At any rate, we are not justified in assuming that infantile paralysis has a different pathology and etiology from that of cases of paralysis in advanced life. It depends on the impaired action of some part of the nervous system; it is the residue of a disease progressing with material alterations in either the nervous centres or the nerves, which either suffer from congestion, or inflammation, or extravasation with their consequences. These may be removed, sooner or later, by natural processes; thus, either the paralysis is also removed, or it continues in such cases where the nerves have already lost their irritability. As a general rule, such cases of so-called infantile paralysis have a great tendency to improve; for most cases, when they are brought under our observation, have had time to get a little better than they were at the beginning, in consequence of absorption to a certain extent having taken place. In a small number of cases, more limbs are primarily affected than in the present case, as for instance, all the upper and lower, or an upper and the two lower extremities. But

after a while, the two lower extremities, or even one of them only, remains paralyzed. But here, the spontaneous improvement comes to a stand-still, and even medical service is sometimes unable to render any services in the recovery of the lost muscular functions. This paralysis, therefore, is a very obstinate disease, and yields no very promising results. But life is seldom threatened by it, all the other functions of the patients remaining perfectly normal; so little, indeed, does it prove fatal, that a French author reports the case of a patient who became paralyzed in early infancy, and reached the age of 49 years, and that very few authors have been so fortunate as to have the opportunity of making a post-mortem examination. Rilliet and Barthez made two post-mortem examinations, in which nothing was found that could be taken as the cause of paralysis; and Fliess, in a case of paralysis of the arm, found congestion of the spinal membranes at about the level of the brachial plexus. From the fact that few cerebral symptoms, or none at all, are observed in cases of infantile paralysis, we have a right to conclude that the seat of the affection must be sought for, generally, below this centre. Some cases will be produced by influences acting on the peripheric nerves—for instance, rheumatic ones; and such will be those giving the scantiest results of anatomical examinations—a fact which is easily explained by both the exceedingly great difficulties of detecting material alterations in the peripheric course of the nerves, and the length of time that elapses between the first paralytic attack and death. But the vast majority of cases are of spinal origin. Heine even goes so far as to consider none but spinal cases as entitled to be called infantile paralysis, and to describe it by the name of spinal infantile paralysis. In the spine, the same alterations as found in the cerebrum are met with; extravasations are not so frequent in the brain; but there are cases on record, and cases of spinal congestion, inflammation, and exudation, will occasionally occur in practice. The majority of cases will be met with at the age of from six months to two years, at a period when the growth of the body is very rapid, and particularly the development of the nervous centres considerable. At the same time, it so happens that the first dentition takes place also; and as generally a number of diseases, almost all the diseases indeed of infantile age that do not proffer a very ready explanation or diagnosis, have been explained by and attributed to dentition, this paralysis occurring in children has been attributed to dentition, and has ever been called dental paralysis, with just as little right as we are justified in speaking of dental meningitis, or pneumonia, or intussusception.

In our case, the probability is, that the premonitory symptoms have been overlooked. A mild fever may have been present without having been noticed; at all events, as there neither are nor have been any cerebral symptoms, we cannot seek for the seat of the disease in the brain; as two extremities are affected, both cotemporaneously and in an equal manner, we certainly have no case of an affection of a peripheric nerve before us. Therefore, we are bound to take it as a case of spinal paralysis. The probability in our case is, that it is the result of congestion, and, as it is of pretty long standing, without any spontaneous improvement taking place, exudation—the former alone being well able to produce paralysis, and the latter being likely to be present unless there is extravasation of blood in cases of longer duration, and exhibiting no change.

The question of therapeutics is a very important one, and will be answered according to the diagnosis of the material lesion and the stage of the disease. In the acute attack, with fever and sensitiveness of the spine, etc., local depletion, mercurials, antifebriles, etc., might be indicated. Certainly not so in an old case. Extravasation will scarcely be the object of remedial treatment. Congestion would require, perhaps, local depletion and derivants; at all events, however, such medicinal agents as are known to have some influence in contracting the lumen of the blood-vessels—for instance, quinine or *secale cornutum*. Exudation would indicate the administration of absorbents, such as mercurials, iodine, and more or less powerful derivants, both external and internal. Loss of sensitiveness of the nerves, finally, without any or proceeding from a past, anatomical lesion, would require the use of such remedies as are known to act as powerful stimulants for the nervous system, such as *nux vomica* and its preparations; not to speak of gymnastics, active and passive movements, faradization, frictions, etc., for the purpose of re-establishing the functions of the muscles. Thus, indeed, local depletion, vesication, *moxæ*, iodine, mercury, and strychnia play the most important part in all the essays on the treatment of infantile paralysis.

Congestion, and probably exudation, are likely to have been the anatomical change in or on the spinal column.

Treatment: Passive movements; *secal. cornut. recent. pulv. gr. iii.*, three times a day; increased to *gr. iv.* after a week, and *v.* after two weeks, and *syr. ferri iodidi gtt. v., viii., x.*, three times a day.

A decided change for the better already, four weeks afterwards, at which time the patient was presented for an intense pharyngitis; for

this he took for four days the following mixture: R.—Chlorat. potass., \mathfrak{z} iii, aq. \mathfrak{z} vj., M. D. S.: Half a table-spoonful every two hours.

69. Charles P., æt. 7 years. *Anæmia, Morbus Coxarius*, left hip, first stage. Is reported to have enjoyed good health, with the exception of occasional epistaxis, until three years ago, when he had a hæmorrhage, probably from the stomach. Since that time, he is said to have suffered from strabismus, loss of appetite and flesh, and diminution of mental powers. Ten months ago, he had a feverish disease, with unconsciousness and delirium, for thirteen days. Three months ago, he complained for a week of fever and pain in his left side, but has been well since. Skin and conjunctivæ pale, general emaciation, impulse of heart strong, no enlargement of heart, lungs normal. Fell from a chair five weeks ago; complains of pain and stiffness after getting up in the morning, is easily tired, drags his left foot a little, and has pain in left knee and ankle; some pain on direct pressure on the hip-joint, and more by pressing the caput femoris against the acetabulum. The gluteal region of the affected side commences to enlarge, and the fossa intertrochanterica to disappear. Thus, the first stage is on the point of being transformed into the second. Treatment: Five leeches to the hip-joint, to be repeated after four days; Davis' splint; generous diet; cod-liver oil, and ferr. pulv., gr. iv. daily.

70. Rosa S., æt. 5 years. *Microcephalus, Catarrhus Intestinalis, Lienteria*. Has an older brother, and a younger sister, both healthy and well developed, both physically and mentally. Circumference of the head $17\frac{1}{2}$ inches; longitudinal diameter being normal; frontal bone low and narrow; anterior part of the cranium very small in proportion to its posterior; cranium solid and hard; face proportionately large, especially the lower maxilla strong and prominent; lips full and hanging; tongue prominent and thick, constant salivation; no articulation, restless, troublesome, always laughing, breaking anything, passing fæces and urine carelessly; sleep sound, with the exception of sudden interruptions; extreme voraciousness, swallows everything, clean or dirty; a large number of ingesta, food and other, will pass the bowels unchanged; frame robust and strong; the mother knows that this patient exhibited no pulsation over the region of the large fontanel, like her other children. The anatomical cause of this microcephalus and idiotism is evidently a precocious ossification of the cranial sutures, particularly the frontal and coronal. No medical treatment possible.

71. Mary V., æt. 5 years. *Kyphosis* of seventh and eighth dorsal vertebræ.

72. Ann M. L., æt. 1 year, 5 months. *Kyphosis* of the seventh and eighth dorsal vertebræ.

73. Wilhelmine B., æt. 5 years. *Kyphosis* of the last dorsal vertebræ.

74. John G., æt. 2 years. *Kyphosis* of twelfth dorsal and first and second lumbar vertebræ.

75. Thomas D., æt. 8 years. *Kyphosis* of lower cervical and upper dorsal vertebræ.

76. John K., æt. 2 years, 8 months. *Kyphosis* of seventh cervical and first and second dorsal, and of twelfth dorsal and first and second lumbar vertebræ.

All these cases of Pott's disease that were presented at the clinic, had so many symptoms and peculiarities in common, that they may safely be mentioned together. Scarcely in any one of them was there a scoliotic deformity combined with kyphosis, and there was only one case out of six not decidedly scrofulous. Only one out of the whole number had the same affection in two different parts of the vertebral column, viz., No. 76. He had never been a thoroughly healthy boy; the first symptoms of rhachitis still perceptible in the enlargement of his epiphyses and curvatures of his legs; he further had been suffering from pulmonary troubles since he had measles, when a year old. Mucous râles are still heard on both sides; bronchial respiration in the upper lobe of right lung, and decidedly dull sound in right subclavicular region. During the time he was presented, we had frequent occasion to prescribe for a new attack of bronchitis. He was extremely emaciated, his submaxillary glands much enlarged, and eyes suffering from chronic conjunctivitis. Three months after he was first presented, he all at once, in addition to his former sufferings, showed symptoms of the second stage of morbus coxarius. About a week after this, he was taken ill with an acute feverish disease, probably of one of the thoracic organs, the nature of which may, or may not, have been explained by a coroner's inquest, no medical man having been in attendance to make a diagnosis.

In almost all the cases, a fall was accused of having been the *causa proxima* of the affection. Pain over and in the neighborhood of the affected vertebræ; moderate fever; sometimes hyperæmia of the skin; immobility of the vertebral column; disinclination to walk or stand; tendency to support the body by pressing the hands down on the femur; absence of almost any symptoms of spasm, or paralysis, or supuration, were found uniformly in all of them.

The treatment was somewhat uniform also; at least, as to the

care given to the general health. Generous diet, cod-liver oil, and, in the majority of cases, the internal use of iron or quinine. Quinine was generally given as a tonic, in more frequent and small doses; in some cases in single daily doses, of from five to eight grains, as an antifebrile. The patients were kept in a horizontal position, on their back or side, for a sufficient time to reduce the acute pain, and at the same time, in some cases, leeches were applied repeatedly; in others, tinct. iodin. for some time. Then, at last, an apparatus was advised, and usually made by Messrs. Otto & Reynders, to support the trunk without inconvenience to the inflamed vertebræ, and without the least direct pressure on the curvature. In one of the cases its effects in removing the pain, evidently produced by spasmodic action of the longissimi dorsi, etc., was wonderful; the child had complained of this pain continually, both in the erect and the supine positions, before the use of the apparatus, but was so entirely relieved while it was on, that she refused to sleep without it.

(To be continued.)

Absence of the Uterus—Three Cases in one Family of Five Sisters. By
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(Read before the Medico-Chirurgical College, March, 1861.)

Out of a family consisting of five sisters, the first, second, and fourth had no womb; the third and fifth had. In this paper I shall give them for names the first five letters of the alphabet.

Mrs. A. is a widow, tall, bony, slim, brown hair, dark sparkling eyes, very fair skin; the face being meagre, gives the mala an appearance of prominence, which are permanently of a high rose color; lips thin, very regular and white teeth, which are exposed in talking and smiling; mammæ small. Altogether her appearance is very attractive.

Mrs. B. is a widow also, light hair, gray eyes; in other respects is similar to Mrs. A., but less pleasing and attractive.

Mrs. C. is married and the mother of three children; dark hair, blue eyes, very fair, rosy complexion, full mammæ, limbs and body well filled out; lips are fuller than A. and B.; when she talks or laughs, her mouth and fine teeth waken up a strong resemblance to the first two.

Mrs. D. has been a widow and has now a husband; she is of middling height, rather spare, small mammæ, dark hair, blue eyes, very fair; some color in the face; lips thin; mouth and teeth perfectly beau-

tiful, which, when she speaks, show, and give her a resemblance to her sisters; she is very genteel in manners and appearance.

Miss. E. is about 17 years of age, rather short, full, *mammæ* developed, hair lighter than dark; eyes blue, mouth and teeth beautiful, very fair and rosy.

Among these five women, A. B. and D. are spare of flesh, and are the three who have no womb; C. and E. are fleshy, and without defect. In speaking, they all show the teeth, and there is a resemblance of voice in all, which is rather loud and gay.

The two eldest, widowed sisters, and the youngest one, unmarried, lived together. I knew and attended them for two years, not suspecting anything out of the way with them, nor did I know that they had any relatives when I became acquainted with them.

Mrs. D., the fourth sister, and the first one I discovered of having no uterus in the following manner: A lady about 23 years of age, of very genteel appearance, called on me, and said she wished me to operate on her for "a skin that obstructed the passage to the womb." Before examining her, I inquired about the catamenial discharges; she said that she never had had any; that she had no pelvic tumor; that she was quite well, only that she was desirous of having a baby, and wished to have an obstructing skin cut so as to open a passage to her womb, which she was sure would give her the only happiness she was destitute of. Inquiring about her marital relations, she answered that her first husband and the present one were quite satisfied with her, had frequent connections, and never complained of anything being wrong with her. She was so convinced that she was like other women, excepting the obstruction, and so desirous to have it removed in order to become a mother, that she was very communicative, and answered without the least hesitation or embarrassment—at the same time with perfect modesty—all questions. Said her sexual desires were frequent; that her connections were pleasurable; so much so, that in the absence of her husband, and in her widowhood, so great were her desires, that she was compelled to acts of self-indulgence; that for a few days, about every three weeks, her *mammæ*, which are rather small, became fuller, sensitive, and if handled produced a pleasurable excitement.

On examining the parts, the vulva appeared small, and the pilosity scanty. The genital fissure was of limited extent, the vagina scarcely lubricated, and so short that the extremity could be reached with a little more than the first joint of the finger; but by pressing strongly it would yield so as to admit the length of the whole finger; it was a

blind sack, without rugæ, and of a pale color. The clitoris was natural, the nymphæ very small. By the finger, no hardness or anything indicative of a uterus could be felt. A catheter in the bladder and a finger in the rectum gave no assistance in the discovery of one. I ventured to assure her that she had no uterus, but she persisted that there was one—there must be one—how else could she have her strong desires? how else the great pleasures? The reply was, that the absence of a uterus did not exclude the presence of ovaries, which were the authors of desires and sensations; besides that, were there a uterus with such desires as she said she had, the catamenia would occur, and finding no outlet, would in time produce a large pelvic tumor that would press into, and present at the vagina, scanty as it was. None of these remarks satisfied her. All the foregoing details were not elicited at the first visit, but in the course of several that she made; as already remarked, she was communicative without hesitation or shyness, though with modesty and a decency indicative of conscious propriety, and an anxiety for relief.

To gratify her wishes, I consented to operate, and for that purpose procured the aid of a French practitioner of extensive obstetrical experience, a perfect anatomist, and an able man. As her vagina, by repeated use, had become very extensive, it was easy to insert my bivalve speculum, the flat blades of which, separating to any possible extent, rendered the fundus of the vagina tense like a straight wall, and affording space for sight and free movement for instruments. By reason of the tenseness rendered to the membrane, a crucial incision was easily made through the thickness of the membrane. While the speculum was in situ, and after its removal, the finger, worked about and pressed into the cut, could detect no resisting body, such as a uterus, if present, would afford.

Several weeks after this ineffectual operation, the cuts having healed, the patient still anxious and dissatisfied, became so importunate, that for peace sake it was repeated, with no better result than the first time. As yet I did not know who the lady was.

Mrs. C. is the third sister. I was sent for in a hurry to see a lady in labor, not knowing who she was. I attended, and in half an hour she was delivered of a good-sized boy, her fourth child, all living. The expression of her mouth and teeth made me think I had seen her likeness before, and on going into the parlor I was surprised at seeing Mrs. A. and B., both of whom, and Miss E., I knew well and had previously attended; they were now on this birth-visit to the fresh confined sister; presently walked in from another room, Mrs. D., my

obstructed patient, who now, for the first time, I discovered to be one of the same lot of sisters.

Mrs. B., the second sister. Shortly after the accouchement of Mrs. C., I was sent for by Mrs. B. on a Sunday forenoon, when her sisters were gone to church. About a year before this she suffered for the second time from an abscess in the right labium, which I opened, giving exit to the usual foetid and black matter mixed with white. She said: "I have long wished to consult you about a peculiarity I have, and have taken this opportunity while my sisters are out." Her story was exactly the same as that of Mrs. D. On examination, the same state of the parts existed as already described. She, too, had enjoyed marital pleasures during her married state, was now courted, and, before going farther with the negotiation, wished my advice as to the possibility of removing the obstruction. I now ventured to make mention of her sister's case to her, which surprised her, never having had any intimation of it. I said to her, "your other sister, Mrs. A., has been married, but has had no children; can she be like you?" Her reply was, "I do not know, only, like me, she has never had the discharges usual to women, which my sister E. and the one lately laid-in regularly have."

After this I had frequent opportunities to talk with the three about this matter, and always to the same effect.

Lastly, Mrs. A. about this time was courted by a merchant, a widower nearly fifty years of age, in a reputable position and well off, who married her. He appeared to me quite satisfied with his wife, a most desirable woman in all other respects than the deficiency alluded to; and which Mrs. B. remarked to me she thought to be rather an advantage than a loss, considering their ages, as he already had children to look after. I may mention now what ought to have been noticed in describing the case of Mrs. D., that her husband "preferred having her as she was," since they would not be embarrassed with a family.

There was a striking family resemblance in the features of the five sisters as regards the mouth and teeth, also the voice; they were all rather loud-spoken, very chatty, gay and attractive; but the three without uterus were spare women, while the other two differed much as to *embonpoint* and full *mammæ*. Being all still alive, no verification by dissection has been had; but most careful and varied examinations have been made frequently, and nothing felt indicative of a uterus; the absence of catamenia and consequent pelvic tumor are facts corroborative that none exists.

In the *Lancet* for August 18, 1832, a case of Dr. Macfarlane, of

Glasgow, is reported, verified by dissection after death, that followed an operation performed with the intention of making a vagina. In this case, like in the above, there had never been catamenia, though sexual desires were strong, the mammæ and pudendum well developed, and her husband contented. Many like cases are to be found on record, but the foregoing are interesting as all occurring in one family.

On Anatomical Preparations, being a Thesis for the Degree of Doctor of Medicine, in the New York Medical College and Charity Hospital.
By JAMES ELNATHAN STEEL. 1861.

In the study of anatomy, which is one of the most important branches connected with medical science, it is obvious that the use of prepared anatomical material is of essential service. Nothing, in my opinion, can give such skill, confidence and general success in practice as a perfect familiarity with every variety of specimens; and that those specimens should be prepared in the most natural, useful and lasting manner, every one will admit. The giant strides of the science of anatomy and surgery in the last century, have been owing to the increased facilities for dissection and the improvements in prepared material.

A collection of well-prepared anatomical specimens is a library of nature to the student, and if studied with a true spirit of inquiry, cannot fail to prove to him of almost incalculable benefit. Though pictorial illustrations are, indeed, almost indispensable, yet it still remains for the *subject* itself to clear up any doubts that may exist, and stamp upon the mind the true nature of its specific character. In a *bone*, for instance, the *processes foramina*, and even the *tissue* itself, are presented in an unmistakable manner. The fresh *subject*, it is true, is of the greatest importance; but as the study of anatomy begins with the *skeleton*, any further comment upon the necessity of its being properly prepared would be superfluous.

In preparing a skeleton, it is necessary, in the first place, as far as conveniently practicable, to remove all the fleshy particles with the scalpel. Holes should then be made in all the bones that contain any medullary substance, in order to allow the macerating fluid to have access thereto. The skull should be disarticulated from the atlas, and the brain taken out through the *foramen magnum*. Then all should be placed in a vessel of proper size, and covered with a solution of quicklime and water—3viii. to the gallon—and allowed to remain for

ten or twelve days. (The solution should be changed three or four times during the process, to accelerate decomposition.) The skeleton is then to be extended on a table, and the remaining particles of *fibrin* carefully scraped away. In this way the bones can be made quite clean, and with little care the connecting ligaments preserved, which will, when dry, answer as means of support.

In preparing foetal skeletons, the brain may be extracted through the *lambdoidal suture*, instead of disarticulating the head, and the macerating solution should be made somewhat weaker.

The process of *cleaning* is succeeded by *mounting*, or giving the skeleton a proper attitude, which is best accomplished by placing it in a frame of convenient size, and supporting it with wires of sufficient length and thickness, the principal one being placed in the centre of the frame, and the curves given to it that are naturally required by the vertebral column, to which it is to be fastened. There should be holes made in the frame, so that wires may be passed through it in different directions, and in this way the whole skeleton can be kept in position until dry, after which it may be placed upon a proper stand and removed to the museum or elsewhere, as varying circumstances or convenience may require.

There are various ways in which disarticulated bones may be prepared; but the quickest, and probably the best, is to boil them in a solution of carbonate of potassa and water—about $\frac{3}{4}$ vi. to the gallon. This will free them from all extraneous matter, and make them tolerably white. After having been subjected to the foregoing processes and made quite clean, they can be made still whiter by placing and keeping them in an oven until they shall have become quite hot, when they should be taken out, and sulphuric ether applied to their surfaces with a brush, which will have the effect of giving to them a really beautiful appearance.

A thorough knowledge of the different forms of articulation, and how the bones are approximated, could not, probably, be more readily attained than by artificially articulating a skeleton, which may be accomplished as follows:

A rod of iron should be provided, sufficiently strong, and long enough to reach from the coccyx to the top of the head, through which it is to project about half an inch. This end is furnished with a screw and a nut. The coccygeal extremity must be made small and round, and furnished with a screw, but no nut—the small bone, which can be screwed on, answering in its stead. Having made corresponding holes in the sacrum and coccyx, the iron is passed through,

and the small bone screwed against those preceding it. The vertebræ are then placed in position, and leather substituted for the intervertebral substance. The head should have a hole made in it corresponding with the centre of the *foramen magnum*, and, being placed upon the atlas, it is kept in position by means of the nut, that had been previously arranged for the purpose. The ribs, the sternum, clavicle, scapula, carpal, metacarpal, tarsal and metatarsal bones, and the phalanges, are connected by wires, passed through them and twisted. The ginglymoid joints may be neatly articulated with brass hinges, fastened into slits made in the apophysis of the bones with a saw. The circumrotatory motion of the enarthrodial joints may be well imitated by an apparatus consisting of a spring fastened in the medullary canal of the *humerus* and *femur*. A piece of catgut, attached to one end of the spring, is passed through a small hole in the centre of the head of the bone, and secured in the centre of the glenoid cavity and acetabulum. This arrangement will allow of the necessary motion of the joint, and the head of the bone may be drawn from the socket and dislocation assimilated, the spring always causing it to resume its natural position as soon as the force is removed.

For fastening any pieces of bone that may have become detached during the above stated processes, the following cement will be found very useful:

R.—Fellis bovinum,	3i.
Cretæ,	
Pulveris acaciæ, ää,	5ii.
Tritici vulg.,	3ss.
Aquæ qs., et fiat massa.	

In preserving sections of the human body, no method is preferable to that of immersing them in spirits, taking care, however, that they be perfectly cleaned, and so placed in the jars that no part of them shall touch the sides, as such parts become discolored and corrupted. The arteries, veins and nerves may be covered with a varnish made by dissolving sealingwax in pure alcohol. This varnish dries quickly, and will not re-dissolve in the preserving spirits, the strength of which, being necessarily weakened by dilution, will not probably be more than 40 or 50 per cent. Some persons recommend camphorated spirit, which undoubtedly is preferable for small and delicate specimens, inasmuch as it has generally the effect of toughening them. The jar enclosing the specimen about to be preserved, must, after some days, be replenished with spirit, and then firmly closed with a cork stopper. Glass stoppers frequently break by the evaporation of the liquor.

The luting, called "lithocolle," with which the cork is to be covered and the evaporation prevented, is composed of the following ingredients, viz.: common resin, red oxide of lead, yellow wax and oil of turpentine. The resin and wax are melted, and the red lead added in small portions, stirring briskly at each addition. When the mixture has boiled five minutes add the oil of turpentine, and continue to boil the whole for five minutes longer. Care must be taken in preparing this composition, on account of its inflammability. A lid should be at hand, in order to cover the vessel if it should take fire. After having corked the jars and wiped them well with a dry cloth, the *lithocolle* is heated to the boiling-point, and, being well stirred, is applied over the whole surface of the cork with a brush. Sometimes the cement, by penetrating the cork, causes the spirit to evaporate, bursting the surface and thereby occasioning small openings to appear, which, however, are stopped by passing a second coat of lithocolle over the first when it is cold. The mouth of the bottle may be further secured by the addition of an outer covering made of linen, firmly tied, and saturated with liquid pitch. Jars thus preserved may be turned over in all directions, and exposed to the strongest atmospheric heat, without the least perceptible evaporation or escape of the spirits.

Dried specimens are of little value, unless their durability is secured by judicious preparation, in the first instance, and by watchful attention after they have been placed in the museum. In most instances, the careful performance of the former is necessary to secure the success of the latter. During the last two centuries, the art of preserving this class of specimens was but little understood; and to this cause must be attributed the destruction of many extensive and valuable collections. The merits of the two following compositions are now sufficiently established to warrant their adoption in preference to all others. For the arsenical soap invented by Becœur, of Metz:

R.—Acidi arseniosi,	℔i.
Potassæ carbonatis,	ʒvi.
Cretæ,	ʒii.
Camphoræ,	ʒiii.
Saponis,	℔i.

Cut the soap into thin slices, and put them, with a little water, into a pot, which place upon the fire, stirring frequently with a wooden spoon until dissolved; then add the carbonate of potassa and creta; take it off the fire; add the arsenious acid, and stir it well; lastly, put in the camphor, which must be pounded in a mortar, with a little alcohol. This composition has the consistence of ordinary flour-paste.

When required for use, two ounces may be dissolved in a pint of alcohol, and applied with a brush. The antiseptic qualities of the following composition (invented by M. Laurents) will be found of sufficient strength to answer any indication:

R.—Potassæ arsenitis,			
Aluminæ sulphatis,			
Pulveris camphoræ, ää,		ʒii.	
Saponis,		ʒss.	
Alcohol,		ʒvi.	
Ol Thymi,			gutt. iii.

The soap should be powdered, and then placed in a bottle with the arsenite of potassa and sulphate of alumina, and the alcohol poured upon them. In twenty-four hours they will be perfectly combined. The oil of thyme is then added, and the bottle carefully corked and labeled.

As it is extremely difficult to inject a whole subject thoroughly from any one point, in order that the vessels should be properly filled, we shall find it necessary to throw in the injection from different points. If, for instance, we wish to prepare one of the lower extremity, the arteries should be injected from the iliac, just where it leaves the aorta; and the veins from two or three, which we may select, upon the dorsum of the foot. To inject an arm, we may select the subclavian artery, for the arteries; and some of the veins on the dorsum of the hand, for the veins. The veins should always have some hot water forced through them, to remove the clots, before throwing in the injection. The veins of the liver may be injected from the ramifications of those of the mesentery; or the veins of the intestines, from the trunk of the vena portæ. There are no valves in the veins of the intestines, and, consequently, this injection will be easily made.

A very good composition for the injection of the vessels of the viscera is a strong solution of glue, colored with red lead; or an injection made of tallow and turpentine varnish. As both of these compositions, when used, must be warm, it is necessary to heat the vessels of the abdomen, which is most easily effected by making an opening into the intestines, and injecting a quantity of hot water into them.

There are other compositions generally used for injecting the arteries and veins of the trunk and extremities. The one formerly thought to be the best was the *wax injection*, colored with blue or red; but a much better and cheaper one is made of

Tallow,	lbs. ii.
Magnesia usta,	ʒi.
Vermilion,	ʒi.

If this is needed for the veins, it may be colored with blue smalt, instead of the vermilion. This composition possesses all the advantages of the *wax* injection, without any of its inconveniences. It is nearly as transparent as the wax; never melts in the hottest weather, and is not disposed to crack. If used very hot, an extremity, not previously heated, may be injected.

The *cold paint injection*, if well thrown in, seems to fill the minutest arteries better than any other. It is made of

White Lead, well ground,	-	-	-	lbs. ii.
Turpentine Varnish,	-	-	-	℥xii.
Boiled Linseed Oil,	-	-	-	℥vi.

The lead is intimately mixed with the varnish; then the oil is to be added, and the whole to be well mixed up together to the consistence of paste, and in this state to be thrown into the arteries.

The dissection of the *lymphatics* is very easily made when they are injected; but to do this is, perhaps, one of the most difficult operations of practical anatomy. In consequence of the valvular structure of the lymphatics, it is necessary to inject from the extremities towards the trunk. In injecting an arm or leg, we ought to begin as near the fingers or toes as possible. It is necessary, before commencing, for the assistant to see that there are within his reach sharp-pointed scissors, knives, forceps, lancets, pokers, (for tubes,) needles and waxed thread, so arranged that they can be used instantly; for it will often happen that it will be almost impossible for either the assistant or operator to remove his eye for a moment from the vessel, without losing it. Everything being arranged, the foot or hand is to be placed in a tray, that the mercury which falls may be caught. The foot ought to be a little more elevated than the groin, to assist the flow of mercury to that part. With a sharp scalpel a portion of the skin is to be cut off horizontally, so as to expose the loose cellular texture; for in this texture are the superficial lymphatics generally situated. If, as is very often the case, we cannot find one near the toes, we shall probably discover one running across the saphena magna, on the instep. We must then take hold of it with the forceps, and dissect it from the surrounding substance. (To secure the keeping of it, we should put a needle with a fine waxed thread under it.) Having still hold of the vessel with the forceps, we should snip it half across with fine scissors, and into the cut made by the scissors introduce the fine poker, which is made for clearing the pipes. We should now take from the assistant's hand the tube containing the mercury, with the stop-cock already turned, and let the stream of mercury play

on the side of the poker, which will generally so direct the stream that it will enter the vessel. When we have once succeeded in getting a few drops of mercury into the lymphatic, it will be easy to get the pipe into the open mouth of the vessel, and then the poker may be withdrawn. If the vessel into which the pipe is introduced be large, it ought to be tied round the pipe with the thread which was previously put under it. The mercury is to be pressed on by the assistant with the handle of the knife, for the injector ought not to take his eye off the pipe; but he should, according to the direction of his assistant, elevate or depress the tube containing the mercury, which will regulate the force of the injection. The mouth of the vessel ought to be moistened at intervals, to prevent its getting dry, which impedes the flow of the mercury. If the lymphatic, into which we have introduced the pipe, has filled a considerable number of vessels on the thigh, the mercury is then pressed on to the glands in the groin; taking care that the foot is not too much elevated, as by that means the column of mercury would be raised higher than the vessels in the glands could bear, especially as the lymphatics there seem to be more easily burst than at any other part. We should now withdraw the pipe, and look for other lymphatics on the ankle, and proceed with them in the same manner.

These preparations are attended throughout with so much trouble, from commencement to completion, that it is of some consequence to be able to preserve them. If we endeavor to do so by merely varnishing and drying them, we shall soon see our labor defeated; for the change from the horizontal position, or a change of temperature, will, in all probability, burst the vessels. By preserving them in spirits of turpentine, we shall not only avoid the changes of temperature and destruction by insects, but add much to the beauty of the preparations.

MONTHLY SUMMARY OF FOREIGN MEDICAL LITERATURE.

By DR. L. ELSBERG.

36. *The most efficient Method of Removing the Placenta.* By Dr. CREDE. (Monatsschrift für Geburtskunde und Frauenkrankheiten, April, 1861.)
37. *Successful Transfusion in a Dangerous Case of Intra-Uterine Hæmorrhage.* By Dr. ED. MARTIN. (Ibid.)
38. *On a Dynamometric Attachment to the Obstetrical Forceps.* By Dr. KRISTELLER. (Transactions of the Obstetrical Society of Berlin, Monatsschrift, March, 1861.)

39. *On Thrombus of the Vulva and of the Vagina, especially after Accouchement.* By M. LABORIE. (Archives Générales de Médecine, December, 1860.)
40. *New Researches on the Nature and Treatment of Asthma.* By Dr. DUCLOS, de Tours. (Bulletin Générale de Thérapeutique Médicale et Chirurgicale, April 15, 1861.)
41. *Treatment of Lead Colic by Ice Externally.* By Dr. CONSTANTINE PAUL. (Gazette des Hôpitaux, March 30, 1861.)
42. *On the Employment of Terebinthinated Caoutchouc in the Treatment of Phthisis.* By Prof. Dr. J. HANNON. (Revue de Thérapeutique Médico-Chirurgicale, April 15, 1861.)
43. *On the Adulterations of Food, etc., in Melbourne.* By WILLIAM SIDNEY GIBBONS. (Australian Medical Journal; London Chemical News and Journal of Physical Science, April 20, 1861.)
44. *On Death from Chloroform.* By Dr. SANSOM. (Medical Times and Gazette, May 4, 1861.)

36. Having successfully practiced Credé's Method on several occasions, we can recommend it strongly. Credé insists on the removal of the placenta by uterine action alone; he restricts the introduction of the hand in the genitalia to exceptional, extremely rare and urgent cases. His method consists in excitation and increasing of uterine activity. A single energetic contraction may suffice to eliminate the after-birth; and such contractions are to be induced by friction and irritation of the fundus and body of the uterus with the hand through the abdominal covering. This manipulation must be performed at once after the birth of the child. At first the friction must be gentle; gradually we may increase it; the author says he has in innumerable cases, without a single exception, succeeded in a quarter or half hour to induce the necessary artificial contraction, even where there was previously ever so slight uterine action. When the contraction attains its maximum force, he grasps the whole uterus in such a manner that the fundus lies in the hollow of his hand, and the five fingers around the body may still exert a gentle pressure. He says he felt under his fingers the placenta leave the womb in every case; and generally this occurred with such a degree of force, that it at once protruded from the external genitalia, or at least was found lying in the lower part of the vagina. The patient suffers no other inconvenience than the increased pain accompanying the more forcible contraction, which, however, is more than compensated for, by its rendering unnecessary the introduction of the finger or hand in the parts already sore and morbidly sensitive by the previous tension and traction during labor. The womb afterwards remains well contracted; post-partum hæmorrhage is not so likely to occur; inversion can never take place with a regular contraction; while, with the usual proceeding for taking away

the after-birth, the greatest care does not preclude the possibility of its occurrence.

The author, in the very excellent article from which we have gathered the above, also gives an historical view of the various methods of removing the after-birth, and ably discusses some incidental questions and critiques.

37. On a previous occasion, (MONTHLY, Jan., 1861,) we have made our readers acquainted with Prof. Martin's views on Transfusion of Blood in Obstetrical Practice, and have carefully described his apparatus and method of operating. The number of all the cases reported now nearly amounts to sixty. In the case under consideration, a primipara, æt. 20 years, eight months gone, became extremely anæmic, in consequence of intra-uterine hæmorrhage from premature separation of the placenta. Os uteri was three-quarters of an inch in diameter, unyielding; liquor amnion gone; head quite low in the pelvis; very slight discharge of watery blood, without coagula; no sounds of foetal heart; abdomen moderately tense, sensitive, especially at the fundus uteri, which became more and more painful, and could be felt to increase in distention; eyes sunken; skin pallid; pulse 108, small. This was at 6 o'clock, A. M.; a tampon was introduced as colpeurynter, and the attempt made to supply the place of the lost blood with bouillon, egg-nogg, &c., &c. But the stomach would not bear these, and vomiting ensued. At eight o'clock, the fundus rose higher and higher; pulse became imperceptible; countenance fell; swooning ensued; temperature of body sank, and transfusion was decided on. It was performed about nine o'clock. Blood was taken from the median vein of a strong, healthy man-servant. After laying bare, by a cutaneous incision 4-5 lines long, the median vein of the right arm of the woman, the flat trocar was introduced, and the blood of the man, as it ran into a cup placed in water of about 100° F. temperature, was injected with the syringe, previously warmed with water of the same temperature, at four times, in the quantity of about six or seven ounces. The patient complained of no disagreeable sensation; some color returned to the cheeks, and uterine pains became active. On removal of the tampon, the os was found pretty well dilated. The head was in the third vertex position, and was extracted with forceps, after three-fold incision of the broad perineum. The child, a well-developed, eight months girl, was dead, as auscultation had already indicated. With the after-birth, over two pounds of black grumous coagula came away, and the placenta showed a compressed part of about two-thirds its surface, in which fresher and firmer coagula were firmly attached to its substance.

After giving for refreshment a little Champagne, a post-part. flooding ensued, which, though stopped by injections of diluted, first vinegar, and afterwards liq. ferri sesquichloridi, caused such a degree of bloodlessness, that in view of the impossibility of hematosiis by food or medicine, another transfusion of three ounces into the basilic vein of the right arm was made. Gradually the patient reacted, left her bed on the fourteenth day, and has since made a perfect recovery.

Dr. Martin adds to the report of this case the account of another in which he was called on to perform transfusion, after serous effusions into the pleural cavities had already taken place. He declined operating, however, and states his conviction that transfusion offers no hope after the secondary changes, in consequence of loss of blood, and especially serous effusions in the serous cavities of the chest and skull, have already occurred.

38. The introduction of Dr. Kristeller's contrivance in the handle of the obstetrical forceps, to measure accurately the amount of tractile power exerted, we regard as a great era in the progress of obstetrics as an exact science. The mechanical arrangement itself, as yet developed and exhibited, is not free from various objections, but all these will doubtless soon be overcome by the united efforts of the inventor, and others who may experiment with his invention. The present writer intends to have it variously tested, and to lay before the readers of the MONTHLY the result of the investigation at the earliest possible moment.

39. The following are the principal points of M. Laborie's Mémoire:

Thrombus vulvæ or vaginæ supervening after childbirth is always a grave affection, as it can compromise the life of the patient; the gravity varies according to the seat and extent of the effusion of blood.

The effusion may be divided in three categories: the perineal; the epiperineal, *i. e.*, where the blood accumulates above the perineum; and the vagino-intra parietal, *i. e.*, where it occurs in the walls of the vagina. Each of these principal divisions consists of certain varieties; thus the perineal thrombus may be seated outside of the superficial aponeurosis, between it and the middle, between the middle aponeurosis and the deep-seated, etc.

The etiology of thrombus is obscure. The only predisposing cause that can be admitted must be sought in the anatomical structure of the parts of which the vascularity is remarkable, this vascularity being, of course, still increased during pregnancy. The contusing action

of the child on the parts already predisposed may be regarded as the efficient exciting cause.

The diagnosis of perineal and vagino intraparietal thrombus is easy; that of thrombus situated above the perineum is more difficult. As to the important question, Is it necessary to open these tumors, or may they be abandoned to the resources of nature, with appropriate palliative treatment, (iced compresses, etc.,)—it is stated that in most cases the incision can be deferred without injury, and may be entirely avoided in the different varieties of perineal thrombus; it is urgent, however, in epiperineal thrombus and in superficial thrombus, even, when it interferes with the functions of extra-pelvic organs.

40. Dr. Duclos believes that asthma is only a manifestation in the respiratory organs of a herpetic diathesis; that in ordinary habitual cases, the use of sublimed sulphur constitutes an effective preventive medication; and that in graver cases, those which resist the sulphur treatment, arsenical preparations constitute an excellent prophylactic.

That in nearly all cases of asthma an herpetic diathesis is found, Trousseau confirms, and it is thought that an eczema analogous to that seen on other mucous membranes, or on the skin, is developed on the pulmonary mucous membranes, causing the train of symptoms known as asthma. This may suffice as a *résumé* of his pathology. As to his treatment, he passes over the treatment of the attack, and devotes himself entirely to the preventive plan. We will quote the details in his own words: "I prescribe flowers of sulphur in the daily dose of 50 centigrammes to 1 gramme, (about $7\frac{1}{2}$ grains to 15,) according to the age of the patient; to be taken at one dose in the morning, either fasting or at the time of breakfast. This treatment is continued for five or six months, during twenty days each month, or for a year or eighteen months or two years, during ten days only of each month; (*i. e.*, after the patient has regularly taken it for the said number of days, he stops taking it, then commences again daily, stops again, &c.)

"It is impossible," our author continues, "to imagine a treatment more simple or more easy. In general, the remedy is well borne by the stomach. In general, too, it produces no vomiting, no diarrhœa, no constipation, and in the very rare cases where it does exert a purgative action, the association of a very trifling quantity of opium puts an end to any bad co-effect.

"With water sulphur mixes with difficulty, on account of its tenuity and lightness. The water must therefore be added drop by drop, or the remedy be taken in a little sweetmeats of some kind, or in a spoonful of soup.

"I have obtained by this treatment results which I truly do not

hesitate to call very remarkable. * * * * Let other practitioners now make observations; let other practitioners now make experiments; but let them be sure that they make them in the conditions of veritable, legitimate asthma, and not of dyspnoea, connected with organic affection of the heart, great vessels, or lungs. Their researches will, I dare hope, only confirm the statements as to pathology, as well as therapeutics, which I have made in this *Mémoire*."

41. Quite a number of cases are detailed in which the application of a bladder filled with ice to the umbilical region, continued for two hours, and in one case as long as four hours, was followed by great relief from pain and spontaneous passages from the bowels; when in some cases, in spite of various means of medication, no operation had been had for three, four, five and six days. In some cases, in which it was tried before any other remedy, none other was necessary; passages followed within twenty-four hours. The treatment by ice to the abdomen is by no means insisted on as *the one remedy*, to the exclusion of all others, but it is ably advocated by the author, as a precious means of relief from much pain, distress and suffering, and as an extremely useful adjuvant to other means of treatment. [Though by no means new in itself, we heartily recommend employment of Dr. Paul's treatment in such and similar cases.]

42. Pure caoutchouc, cut in very thin and very narrow slices, is thrown in essential oil of turpentine, one part of caoutchouc to two parts of the oil. It is allowed to macerate. Gradually it swells, becomes impregnated with turpentine, the slices approach, reunite, and finally disappear, dissolved in the oil; the solution thus obtained is brown, and of a syrupy consistence. It is then made into an electuary with syrup of elder and a few drops of essential oil of bitter almonds. The dose, says Dr. Hannon, is four tea-spoonsful of electuary a day; an ounce of which may contain about fifteen grains of the terebinthinated caoutchouc. Two spoonsful are given in the forenoon, and two in the afternoon, with an interval of two hours between each. "The dose may be gradually increased, as the stomach can bear, and the patient gets accustomed to the taste and smell of the turpentine, to a drachm, or even a drachm and a half, of the terebinthinated caoutchouc. This administration must be continued daily, till the symptoms of pulmonary phthisis disappear; and I do not abandon it even then entirely, but simply decrease the dose."

Caoutchouc administered in the solid state is inert; it is not digested; it traverses the intestinal canal without alteration; but after "disagregation," by means of the turpentine, it is easily digested, and

seems to favor hematosiſ considerably. Chemically, no *respiratory food* can be richer in carbon and hydrogen than pure caoutchouc, which consists of only these elements.

Given to phthisical patients, “under the influence of terebinthinated caoutchouc, expectoration diminishes rapidly; oppression ceases; night-sweats disappear; diarrhœa and fever stop; gradually strength reappears, and emaciation gives way to *embonpoint*. The cough is one of the first symptoms, too, which disappears.

“No other appropriate treatment need be excluded, while giving the caoutchouc, but it is indispensable to give the latter through the whole continuance of treatment. That the cure of phthisis is not beyond the power of nature, very numerous examples prove; and that the terebinthinated caoutchouc, combined with other remedies, will assist in bringing about such a result, many observations lead me to believe.” Dr. Hannon refers to about a dozen cases.

43. We think the following article of sufficient interest to deserve a place here:

Flour.—I find in my note-book a record bearing date November, 1856, of the examination of several samples of flour at one time. They were eight in number; and of the eight, four were notably adulterated with plaster-of-Paris. Many cases occurred about the same time of the seizure of flour, which, after examination, was condemned as unfit for sale, the venders being punished whenever the act could be brought home to them. Most of the flour so condemned was musty, or otherwise deteriorated by organic change. About the same time a somewhat singular circumstance occurred, which is worthy of mention in this connection. I had been lecturing in a suburb, not then famous for the production of good bread, on the chemistry of bread. After discussing the various phenomena connected with nutrition, with bread-making, &c., I proceeded to illustrate the most familiar adulterations by actual experiment, and by the citation of cases. When I concluded, some local bakers, virtue impelled, rose to say a few words for the credit of the craft. One had been in the trade for twenty-seven years, and had never heard of alum; another was all innocence on the subject of potatoes; and a third was horrified by the bare mention of plaster. I was about to disclaim all personal allusion, as I did not know at which of their shops my sample had been bought, when a gentleman in the body of the crowd rose, and having premised that he was unconnected with the “mystery,” told the following pertinent anecdote without comment: “He had imported a cargo of whitening, an article in great demand among the makers of

effervescing draughts, but unfortunately for him his shipment arrived in cold weather, and was stored at a cost almost beyond its then value. There it remained for some time, 'eating its head off' in the store, for there was no hope of a rise until next spring; when one day, to his surprise and delight, the broker in whose hands it was placed called and reported the profitable sale of the lot. 'What on earth occasions the demand at this season?' inquired the delighted vender. 'Flour's up,' was the laconic reply."

Bread.—Although I am willing to believe that bread is less injuriously, and less extensively doctored here than in London, it is often far from being what it professes. Damaged flour and deteriorated grain are certainly sold specially for the behoof of fowls and pigs, and contribute their share to the prevalent diseases among the former, but they nevertheless often find their way to the table. I have lately had some samples of bread under examination for fungi; but although I could have taken a hint from the oft-quoted Dauphine, and have eaten pastry, rather than such bread, I was not sufficiently satisfied of their presence to feel justified in condemning it; as while the conditions for the growth of fungi subsisted, the plants themselves were not to be found. I have already made mention of potatoes as a common, I may say, a general adulteration of bread, not in the form of potato-flour or starch, but entire or simple boiled mashed potatoes. The fraud here is the substitution of a less for a more nutritive article, and one too that holds a larger quantity of water. The same objections, with others on which it is needless to enter, apply to the use of rice.

Spirits.—To the liquors sold in Melbourne I have had opportunity of giving special attention, and I have notes, the publication of which, with names and addresses, would probably astonish the persons to whom they refer. It must not be supposed that liquors sold over bars are the same as those delivered into cellars, or from bonded stores. Such little trifles as water, salt, alum, burnt sugar, frequently enter into the composition of the nobbler, and one or other may almost always be found. Were it otherwise, there would probably be a much larger amount of drunkenness produced with the expenditure of smaller sums of money. People could get "wholesomely" drunk too soon upon spirits of the full strength, and the most profitable kind of trade, viz., tippling, would run a risk of being curtailed; while if the diluent alone were added—and I believe that this may be the only addition in some few of the best houses—the reduction could not be carried to so great an extent as is common. To take an example, one of many, over the bar of a house that shall be nameless, one of a class,

a spirit (rum) was sold, which was within a fraction of forty degrees of proof below an average sample obtained from a respectable wine merchant, and employed as a standard for comparison. The solid constituents were very little reduced, and the extractive matter, including the gum, sugar, &c., was but little less. How then had the change been effected? The strength had been brought down by water, the color, and part of the flavor restored by burnt sugar, and other, perhaps less agreeable, organic matters, and the roughness which might tickle unrefined palates was imparted by alum, the constituents of which were present in larger quantities than could have been attributable to the water. In the matter of brandy, less consumed, perhaps, by the class of customers thus played upon, I found less doctoring of the sort described. Brandy is even more exposed to doctoring than rum, but to do it well requires rather more nicety, and the ingredients are not of the same rough-and-ready kind. In the series of experiments to which I refer, I find a brandy fifty-three degrees below the assumed standard. In this instance there had not been any addition of alum or other mineral astringent; probably the water was almost the only adulteration, the use of some highly concentrated astringent, such as catechu, being alone admissible under the circumstances. Neither capsicum nor tobacco were found, nor had any mineral acids or metallic salts, except common salt and alum, been added to any of the spirits examined. The advance in price was the same as in the former case cited, but the bulk was doubled, so that the profit bordered on the fabulous.

Beers.—In the beers it was more difficult to discriminate between the work of the English and the colonial brewer, and to determine the publican's part in the doctoring. I believe, however, that his share is limited to collecting all the drains of the counter, and the other beer-engine waste flow, into a butt, whence it returns in combination with original beverages, and to drawing from two butts. The latter operation has place more particularly with ale; the pipe going down from the engine is branched, one end going into the English brand, to whose name it answers, and the other into some colonial abomination; or, perhaps, into the *omnium* before mentioned, though the chief use of that is, no doubt, for the ready production of half-and-half.

Confectionery in its most artificialized forms is a fruitful source of disease; and well it may be. The most noxious types of those really intended for eating (though many ornamental devices not addressed to the palate yet find their way into the stomachs of children) are the comfits of dead white, body colored externally. In some of these I found the following coloring matters: the red was a harmless organic

pigment, one of the lakes commonly used; the yellow was the poisonous chromate of lead, and formed a thick coating on the surfaces of some of them, while in others the pigment was diffused; the same deadly paint was used in combination with the red to produce orange; the blue was ultramarine, and the same pigment faced with red furnished a purple. The white opaque mask, though uninviting enough, was nearly all sugar, and did not contain any plaster-of-Paris or other earthy matter.

Coffee.—Perhaps the most remarkable example of local adulteration and sophistication is coffee. I long regarded it as the sole case of the kind that demanded notice. The question “What is coffee?” should now have for its reply, “Coffee is a manufactured article, varying according to the products of the country in which it is made; in Melbourne it consists in part of the berry whose name it bears, and in great part of gram, maize, peas, roasted corn or potatoes, and chicory.” The case of coffee is a very singular example of the gradual perversion of public taste, by means of gradually increasing adulteration. Formerly, in England, coffee in its purity was a staple commodity; its flavor was well known, and was highly esteemed. Presently chicory was introduced with specious and false recommendations as an improver, an economizer, &c.; then those grocers who had before used it increased the proportion to keep pace with the times, and before long the coffee with an admixture of chicory, might be called chicory with an admixture of coffee. The chicory then became a mixture, as it is now, and the diluted ingredient required a disguise in the shape of color; and the coffee mixed with mixtures became a very indefinite compound, and needed all sorts of sophistication to correct flavor and color. At this point, then, when coffee is merely a subordinate ingredient in the compound, begins the history of our adulterations, and the Melbourne manufacturer avails himself of the state of the public palate to acclimatize the usages of the London market. The state of the markets dictated whether maize, or gram, or peas, or potatoes should be the staple, and they were flavored and colored with chicory, enough coffee being added to tone the whole, to impart a modicum of their essential qualities which are possessed by coffee alone of all the ingredients, and to satisfy what served the artist in place of a conscience.

A few words in conclusion. Without intending to defend the traders who either adulterate or sophisticate our food, I must distinctly throw the blame upon the consumer, who is the cause. No one who goes out of his way to a cutting shop, or who endeavors to purchase an article at a less sum than it can remuneratively be produced for, has any

right to complain of adulteration, nor is he entitled to raise a cry against sophistication, if he insist on an ideal standard of color or texture. A manufacturer of genuine mustard, then almost the only one, tried for years to get his mustard into the English market, but was always at a disadvantage. It was of a dingy-brown color, whereas the sapient public would not be content with anything but bright yellow. Of course, said public was accommodated by the help of starch and turmeric. And so it will be with everything else. If people set their minds on having coffee at ninepence a pound instead of eighteenpence, grocers would be found to supply the article.

44. The author considered that, at the highest estimate, the number of deaths from chloroform to the number of inhalations bore the proportion of one to ten thousand. Various considerations, however, concurred to show that this should be very much more favorable. In the first place, it was very probable that several of the deaths were from shock or fright, and not from chloroform; and in furtherance of this view was the fact that half of the number of deaths occurred before the commencement of the operation for which chloroform was administered. Another avoidable circumstance increasing the death-rate was supposed to be carelessness and laxity in the administration of the vapor. Circumstantial records of thirty-four cases of death which have occurred since the publication of Dr. Snow's work were presented: the author combined them with those recorded in that volume, and offered an analysis of their most salient points. In cases of death the proportion of males and females is about two to one; and this seemed to the author strange, since the anæsthetic is so largely used in midwifery. The average age for death is thirty to forty. It certainly seems that the strong and healthy stand a worse chance than the debilitated; but of all states of the system, chronic or acute, alcoholism the most predisposes to death. Extensive disease of the lung occasionally disposes to death from asphyxia; disease of the heart probably does not influence the mortality. Dr. Sansom strongly deprecated the administration of chloroform sprinkled on handkerchiefs, etc., basing this not only on the observed fact that a highly-charged atmosphere (5 per cent. Snow, 8 per cent. Lallemand, Perrin, and Duroy,) was fatal to animals, but on the circumstance that of all the cases which he had collected, only two were mentioned as occurring wherein a proper inhaler had been used. Of fifty-one cases, thirty-eight declared their danger by sudden stoppage of the pulse. Five deaths occurred in which there was manifested great muscular excitement, collapse immediately following; these were all strong men, in their prime.

Sudden vomiting and then death occurred twice; congestion of the face was the most marked sign in six, and cessation of breathing in eight cases. Dr. Sansom considered that death occurs both by asphyxia and by syncope—in animals by palsy of respiration, the heart being “ultimum moriens;” in man occasionally from this cause, but more frequently from palsy of the heart, the respiration outliving it. In animals a constant sign on post-mortem examination is distention of the right chambers of the heart; in man this is a frequent, but still far from a constant sign. Fluidity of the blood and a dark color thereof occur almost invariably. The following were the author’s conclusions: In animals death occurs by asphyxia, and begins in the brain. In man death occurs by asphyxia or syncope, and begins in the brain, in the heart, or in the lungs. Artificial respiration is the only reliable means for restoration in critical cases. Galvanism of the phrenic is valuable where the means are at hand. Before anything is done the tongue should be well drawn forward, and the mouth and throat cleared from mucus.

REVIEWS AND BIBLIOGRAPHY.

Researches upon the Venom of the Rattlesnake, with an Investigation of the Anatomy and Physiology of the Organs Concerned. By S. WEIR MITCHELL, M.D., Lecturer on Physiology in the Philadelphia Medical Association. Published by the Smithsonian Institution, Washington City, 1861. Quarto, pp. 145.

On the Treatment of Rattlesnake Bites, with Experimental Criticisms upon the Various Remedies now in Use. By S. WEIR MITCHELL, M.D., &c. (Extracted from the North American Medico-Chirurgical Review for March, 1861.) Phila. Octavo, pp. 45.

The contributions of Dr. Mitchell are deserving of special notice at our hands, on account of their intrinsic value, and as exhibiting the laborious researches a physician may prosecute while in attendance upon the humdrum routine of daily practice. Our profession too often resign themselves to the idea that no time is at their command for study and private research, and, in a few years after the attainment of the diploma, contentedly lay aside all aspirations for improvement, falling into an empirical method of treating disease according to nosology, and avoiding everything like study. Now it is difficult to define what will be or what will not be of practical value to the medical man, since every new discovery in physics, chemistry, physiology, &c.,

&c., may have some influence on the science or art of medicine; and hence whatever particular bent his mind may have by following that during his hours of leisure, (and it is really singular how *many* hours of leisure the busiest men have !) he may accomplish something for the good of his profession. Researches of the character of those undertaken by Dr. Mitchell serve to clear up errors in physiology; to show our ignorance, which is always the first step towards knowledge, and to enlarge our sphere of knowledge. That these results are inevitable, every one will admit; and hence our surprise (almost approximating disgust) when we learned that Dr. Mitchell's paper, which is now published by the Smithsonian Institution, was rejected by the Committee on Prize Essays of the American Medical Association, *because* it "gives so little prominence to the strictly medical portion of the subject, that it hardly merits a place in the Transactions of this Association." We congratulate Dr. M. that he escaped an interment of his paper in "*the big book*;" and we congratulate the Smithsonian on placing among their quarto publications one so likely to be of decided service to medical and scientific men, and such a real "contribution to knowledge."

The crotalus has occupied attention for years, on account of its peculiar venomous character, and the numerous antidotes which have been from time to time lauded as infallible in the cure of those bitten by it. But notwithstanding this general attention, there has been very little scientific study of the subject. Dr. M. gives us the anatomy of the venom apparatus at full length. We regret that we are prevented from transferring this portion of the paper, as it would hardly be intelligible without the aid of the very superior illustrations accompanying the description. A few sentences may, however, be of interest to those of the profession who have no access to the paper.

"The heads of the true serpents are so constructed as to admit of a large amount of movement in the component parts. Thus, the zygomatic bones which support the lower maxillary bones are loosely articulated to the mastoid bone, which is itself so mobile as to permit of the greatest possible expansion of the throat. Anteriorly, the superior maxillary bones are united by ligaments only to the intermaxillaries; and the lower maxillary bones of each side are also so connected anteriorly as to permit of their being widely separated, and of one or the other side of the inferior jaw being drawn down to some distance without involving a corresponding motion on the part of its fellow. Finally, the superior maxillary bones, the pterygoid and palatal bones, admit of considerable movement, so that the arches which they form can be widened or narrowed as circumstances may require. The mobility of these parts is essential to the motions which raise and

depress the fang, and to the deglutition of the large animals upon which the snakes are accustomed to prey."

"The poison-fang, when at rest, projects downward and backward into the mouth of the serpent. It is firmly anchylosed in the alveolar process, which crowns the shortened upper maxillary bone, whose peculiar brevity is characteristic of venomous snakes. * * The poison-gland occupies the side of the head, behind the eye, and beneath the anterior temporal muscle. * * The general form of the gland is that of a flattened, almond-shaped oval, the posterior end being somewhat obtuse, and the anterior tapering to the duct, which begins just behind and below the eyeball. * * The length of the organ from the insertion of the articular ligament to the beginning of the duct was found to be eight-tenths of an inch, in a snake which was four feet long, and weighed two pounds and two ounces. Its breadth was nearly two-tenths of an inch, its thickness about one-eighth to one-tenth of an inch."

But by an examination of a number of snakes, no decided relation could be made out between either size or weight of the gland and the size or weight of the snake.

There is no reservoir of the venom secreted by this gland; the venom is stored away simply in the duct and its enlargement within the gland.

"The duct expands somewhat suddenly as it enters the gland, and being directed backward and a little upward, forms an irregularly-rounded cavity, which runs nearly the whole length of the gland. Into this receptacle the smaller ducts of the gland empty their contents. From the sides of this cavity there run, obliquely upward and a little backward, from five to eight layers of white fibrous tissue, which, lying transversely to the long axis of the gland, separate its secreting portion into lobes, which narrow as they approach the central cavity. The septa here described are finally lost in the capsule of the gland. On their passage outward, they send off numerous branches and thin sheets of tissue, which proceed upward, for the most part, but also across the lobes, and thus involve the secernent structure in a supporting scaffolding of the firmest possible character. The gland, so constructed, resembles very strikingly, in section, the appearance of a small testicle. * * The intimate structure resembles very closely that of the typical salivary glands."

The structure of the fang, a subject of intense interest to the student of this subject, is thus given from Owen, having been verified by our author:

"To give an idea of the structure of this tooth, we may suppose a simple slender tooth, like that of a boa constrictor, to be flattened, and its edges then bent towards each other, and soldered together, so as to form a tube, open at both ends, and inclosing the end of the poison-duct. The duct which conveys the poison, although it runs

through the centre of the tooth, is really on the outside of the tooth. The bending of the dentine beyond it begins a little beyond the base of the tooth, where the poison-duct rests in a slight groove, or longitudinal indentation, on the convex side of the fang; as it proceeds, it sinks deeper into the substance of the tooth, and the sides of the groove meet and coalesce, so that the trace of the inflected fold ceases, in some species, to be perceptible to the naked eye, and the fang appears, as it is commonly described to be, perforated by the duct of the poison-gland."

When a fang is shed, it is replaced in a very short time; when extracted by violence, some weeks are required. Dr. Johnston, of Baltimore, has shown that the secondary fangs have separate capsules, located in the mucous membrane, at the bottom of the functioning fang. When the latter has been shed or violently displaced, the reserve tooth is pushed forward into a recess "adjacent to and on the *inner side* of the fang."

The animal has entire control of the fang, which is really obedient to volition; and the force with which the poison is thrown from it depends to a great extent upon the amount contained within the gland. A case is mentioned where it was thrown some five or six feet. As much of the venom may be cast over the skin when an animal is bitten, it may frequently happen that a sufficient quantity does not enter the puncture made to act seriously on life. In such cases almost any treatment would be followed by apparent success, and the articles employed would be ignorantly considered as antidotes.

The chapter on "The Physical and Chemical Characters of the Venom" is quite interesting. The largest amount ever collected from one fang by Dr. M. was fifteen drops. Its color varies from a straw yellow to an emerald green. It is tasteless and inodorous; reaction uniformly acid, while that of the mucous membrane of the mouth was alkaline. Prof. Hammond succeeded in obtaining crystals, by allowing a dilute mixture of the venom to dry under a cover-glass, resembling triple phosphate, and which may be called *crotaline*. The result of the chemical examination shows that the venom consists of albuminoid substances, some of which are coagulable at 212° , and others (*crotaline*) not coagulable at that temperature, a coloring matter, a trace of fatty substance, with some chlorides and phosphates. The most protracted boiling does not appear to exercise any effect on the virulence of the venom.

The fifth, sixth, and seventh chapters of Dr. M's Smithsonian paper are devoted to the toxicology of the venom, with its action on vegetable organisms, the lower order of animals, and upon the tissues and fluids of warm-blooded animals. The eighth chapter is devoted to a

consideration of *crotalus poisoning* in man, sixteen cases of which, with all the facts recorded concerning them, are tabulated by the author. The local symptoms produced by the bite of a snake are pain, followed by swelling, discoloration, &c. "The swelling is due, not to inflammation, but to a large or small collection of effused blood about the wound." In the cases reported, however, a ligature was applied, and this may have exerted some influence on the production of these local symptoms; although, where a ligature has not been applied as in animals, swelling also occurs but very slowly. These symptoms, however, increase: the swelling and discoloration extend up the limb; the color of the surface is that of an old bruise; vesication may occur, and gangrene be established in the part. The *constitutional* effects set in easily; within a very few minutes there is terrible prostration of all the vital energy, with all the regular accompaniments of such depression; cold sweats, nausea and vomiting; quick, feeble pulse; anxious expression and disturbed mind. If death does not result speedily from these constitutional effects, then the local symptoms become of prime importance. "The signs of blood-poisoning develop themselves, and within a few hours, or a day, the face and other parts become swollen and puffy. At the same time the general weakness remains well-marked, as shown by repeated syncope, the heart quick, feeble and fluttering, and the respiration labored. In the majority of cases, the slight mental disturbance now passes away, and the mind remains singularly clear to the close, whatever the event may be." The duration of the case, before death brings relief, seems to vary. In the sixteen cases given by Dr. M., four proved fatal; death taking place in five and a half hours, nine hours, eighteen hours, and seventeen days respectively.

Dr. Mitchell's second paper, which considers the treatment of rattlesnake bites, is almost practical enough to attract the attention of the Prize Committee of the American Medical Association. It discusses the fallacies which have arisen from ignorance as to the secretion of the poison, and the mode in which the fang is employed and the venom ejected. Every bite is not necessarily poisonous. Not only may the amount of venom be insufficient, but the fangs not being elevated "sufficiently when striking, the fang-points touching the skin may be driven backward towards their usual position of repose without penetrating the part aimed at; the wound inflicted is occasioned by the teeth of the lower jaw; only one fang may penetrate," &c. In such cases, almost any treatment being successful would receive the credit of being thoroughly and reliably antidotal.

As seven-eighths of the persons reported as bitten by rattlesnakes have recovered, with treatment almost as different as the ingenuity of man could make it, evidently ignorance is general as to the *nature* of the disease produced by the venom, and fallacies must arise also from this cause.

An antidote does not necessarily imply chemical influence on a poison, although this is the true nature of such when used for most mineral poisons. Anything that will counteract the effects of a poison is rationally entitled to the name of antidote. It would require a large volume to narrate the articles which have, from time to time, claimed attention as antidotes for crotalus bites. The old *post hoc* doctrine seems to be the basis on which the deductions as to *propter hoc* have been made. Dr. Mitchell very carefully analyzes the different methods of treatment proposed by prominent physiologists and members of the medical profession, and closes his paper by his own plan of treatment, which we lay before our readers, as of decided practical value.

"When called to a patient who has been bitten by a rattlesnake, the physician should at once ligate the limb with a *broad* band, as tightly as may be needed to check the circulation, while, wherever it is possible, cups should be also used immediately over the wound. The question of immediate excision or ablation of the part will be then determined by considerations already given." (The author thinks that ablation might be of use, if done early; and that *incision*, when used at all, should be employed so as to lay open the fang-wounds, which are then to be exhausted by suction, cups, &c.) Injections of iodine dissolved in iodide of potassium solution may then be made, with the view of limiting the local disease, and the actual cautery may even be applied. "Meanwhile, *stimulus* in some shape should be given; and when the excitement thus obtained is sufficient, the finger should be laid on the pulse and the band loosened. As the system becomes depressed, the ligature is once more to be drawn tighter, and, with continued use of stimulus, the economy prepared for another dose of the venom, which is thus to be antagonized little by little. Finally, it will be requisite to shift the band higher up the limb, to avoid the too great constriction of the damaged member. The further management of the case, with regard to stimulus, must be left to the physician, who will remember that, in most cases of severe poisoning, he has to deal finally with a blood which has lost a part of the whole of its power to coagulate. He may find in the mineral acids, tonics, as quinine, and the continued use of stimulus, the necessary means of carrying his patient through the later stages of the malady."

Prof. Hammond, of the University of Maryland, employed with good results Bibron's antidote, which it is proper we should give before closing this article. R.—Potassii iodid., grs. iv.; Hydrargyri

chlorid corrosiv., grs. ij.; Bromini, 3v. M. Ten drops of this mixture, diluted with a table-spoonful or two of wine and brandy, constitute a dose, to be repeated if necessary. Dr. Mitchell's trial of the antidote was not marked with success, and he considers that its properties are as yet not sufficiently proven.

In closing our notice of Dr. M's researches, we have but to express our admiration at the care and intelligent faithfulness with which he has explored this *terra incognita*. Papers like these are an honor to the profession, as well as to their authors.

L. H. S.

A Manual of Military Surgery; or, Hints on the Emergencies of Field, Camp, and Hospital Practice. Illustrated with Wood-Cuts. By S. D. GROSS, M.D., Prof. of Surgery in the Jefferson Medical College. Philadelphia: J. B. Lippincott & Co. 1861.

The substance of this little work of 186 pages, small 12mo, was, we are informed in the preface, originally intended as an article for the medical journal of which the author is an editor. It is now published in the present form for the benefit of the young physicians who are hurrying to do volunteer service in the army of their country.

It is divided into thirteen chapters, a mere outline of which we give, that our readers may know the character of the work, and its appropriateness for the present unfortunate emergency.

Chapter I—Historical Sketch of Military Surgery, giving the titles of the best and most recent works on Military Surgery. The latest works are: "Notes on the Surgery of the War in the Crimea, with Remarks on the Treatment of Gunshot Wounds," by Dr. George H. B. Macleod, now Prof. of Surgery at Glasgow; a work by Dr. Lewis Stromeyer, Physician of the Royal Hanoverian Army, issued in 1858, in two volumes, and entitled "*Maximen der Kriegsheilkunst*," to which a Supplement was added in the early part of the present year; a work by Sir George Ballingall, a fourth edition of which appeared recently in Edinburgh. This has for its title, "*Outlines of Military Surgery*," and is regarded as one of the best works on the subject in the English language.

The works of Guthrie have always been held as among the most valuable, and we have heard it stated by military surgeons that the lectures on Military Surgery which appeared in the *Lancet* in 1854 were the most concise and practical works on the subject to be found. Dr. Gross also recommends for the use of army medical officers the volume

entitled "Hints on the Medical Examination of Recruits for the Army," by the late Dr. Thomas Henderson, a new edition of which was published a few years ago by Dr. Richard H. Coolidge, U. S. A.

Chapter II—Importance of Military Surgery.

Chapter III—Qualifications and Duties of Military Surgeons. In this chapter the author recommends that each regimental surgeon should have two assistants in time of peace, and at least double that number in time of an engagement. We think the latter number is not enough, and that the experience and practice of foreign armies is in favor of a greater number when in active service.

Chapter IV—Medical Equipments, Stores and Hospitals: Giving an account of the means and appliances of conveying the wounded and disabled from the field, of ambulances, medical stores, instruments, apparatus, of nurses, and their duties.

Chapter V—Wounds and other Injuries. Treating briefly of fractures, dislocations, bruises, sprains, burns, and wounds, whether punctured, lacerated, or gunshot.

Chapter VI—Amputations and Resections, confined to the peculiarities demanded by military practice.

Chapter VII—Ill Consequences of Wounds and Operations; such as traumatic fever, hæmorrhage, excessive suppuration, spasm, erysipelas, gangrene, pyæmia, and tetanus.

Chapter VIII—Injuries of the Head, Chest, and Abdomen. This chapter treats of concussion and compression of the brain, of gunshot injuries of the skull, of wounds of the brain, scalp wounds, wounds of the face, chest, and abdomen.

Chapter IX—Diseases Incident to Troops.

The bullet is not near so fatal to an army as disease. The carefully-prepared statistics of foreign governments upon this point are reassuring to the soldier, and show him how much depends upon himself, in this question of mortality. Even at this day, with all the improvements in fire-arms, and the wonderfully increased efficacy of the means of warfare, it is not the killed and wounded which disable an army, but rather disease. "The diseases which attend armies or molest soldiers in camps, garrisons and hospitals, and which so often decimate their ranks, and even at times almost annihilate whole regiments, are the different kind of fevers; especially typhus, typhoid, dysentery, diarrhœa, and scurvy." In the Crimea, the British army lost over 33,000 out of 94,000 engaged; of these, only 2,658 were killed in action; 1,761 died of wounds; while of the rest, over 16,000 died of disease, and 13,000 were sent home on account of sickness. Of the French army, 7,500

died in action, or from wounds received; 50,000 from disease, and 65,000 were sent home for sickness.

In the late war with Mexico, our own army met with the loss of ten men from disease, to one in battle or from wounds. About 1,500 only were killed in battle and died from wounds, while nearly 15,000 died from disease, and over 10,000 were discharged on account of sickness.

The disease incident to troops becomes, then, a most important study; and the offices of a physician are next in importance to the commander-in-chief.

Chapter X—Military Hygiene. The prevention of disease in a body of men such as constitutes an army is one of the most important duties of a medical officer. The suggestions this chapter furnishes are most valuable.

The remaining chapters are upon the following subjects: Chapter XI—Disqualifying Diseases; Chapter XII—Feigned Diseases; Chapter XIII—Medical, Surgical, and Dietetic Formulæ.

This little book, which can easily be carried in the pocket or knapsack, presents, in a very few suggestive words, much valuable information to all who are just entering the military service of the country, and particularly to the younger members of the profession, to whom most of the duties will be new. It is a timely and valuable volume.

A Treatise on Human Physiology: designed for the use of Students and Practitioners of Medicine. By JOHN C. DALTON, JR., M.D., &c., &c. Second Edition, revised and enlarged, with 271 illustrations. Philadelphia: Blanchard & Lea.

The first edition of this work appeared in 1859; a review of it was given in the MONTHLY, for May, of the same year. Within two years, a second edition has been called for, and the author, in preparing it, has not been contented with sending out a stereotype copy of the former edition, but has most industriously revised the whole work, adding several complete chapters, and essentially modifying others.

The principal additions and alterations which the author states he has found advisable are:

“First, the introduction of an entire chapter devoted to the consideration of the *Special Senses*, which were only incidentally treated of in the former edition. Second, the rearrangement of the chapter on the *Cranial Nerves*, and the introduction of some new views and facts in regard to their physiology. Third, an account of some new experiments, original with the author, relating to the functions of the *Cerebellum*, and the conclusions to which they lead. Fourth, certain con-

siderations respecting the general properties of *Sensation* and *Motion* as resident in the nervous system, which are important as an introduction to the more detailed study of these functions. Fifth, the introduction of a chapter on *Imbibition* and *Exhalation* and the functions of the *Lymphatic System*, including the study of endosmosis and exosmosis, and their mode of action in the animal frame; the experiments of Dutrochet, Chevreuil, Gosselin, Matteucci, and others, on this subject; the constitution and circulation of the lymph and chyle; and finally, a quantitative estimate of the entire processes of exudation and reabsorption, as taking place in the living body.

"Additions have also been made to the chapters on Secretion, Excretion, the Circulation and the Functions of the Digestive Apparatus."

Our opinion as to the matter contained in this volume, and the manner of its utterance, is generally the same as that expressed in the review already mentioned. The views then held of the first edition are confirmed by the additions, which supply, in a great measure, the deficiencies we then noted in the work. There seemed to us to be something wanting in the first edition, in the division on the nervous system, to bring that part as well up to the state of physiological science as were the other divisions. These deficiencies are in a great measure supplied by the chapter on the Special Senses, the new views in relation to the physiology of the cranial nerves, and the author's original experiments in relation to the functions of the cerebellum. The clear, simple, elegant style of the author, gives an additional attractiveness to the subject. It is hardly necessary for us to add, that we hope a speedy call for a third edition will show the appreciation of our profession for the labors of the author.

A Hand-Book of Hospital Practice; or, an Introduction to the Practical Study of Medicine at the Bedside. By ROBERT D. LYONS, Prof., etc., of Dublin. New York: Samuel S. & William Wood, 389 Broadway. 1861. 8vo, pp. 185, (and 48 ruled pages, presenting model forms for reporting cases.)

Few persons, if any, have ever become skillful, self-reliant, and successful practitioners in medicine and surgery, who have not closely watched and recorded the phenomena of disease at the bedside during their student-days in hospital. All medical experience and authority are unanimous that clinical or bedside study in a hospital is indispensable to the formation of a sound and safe practitioner; yet this truth, though now trite and common-place in all mouths, is still barren of at least half which it practically imports. For clinical or bedside study

implies something more than the half-curious, half-listless manner of reconnoitring, *à la distance*, a striking injury or unusual disease too often witnessed on the part of some students.

One of the greatest impediments to the student's progress is unquestionably the want of some methodical plan upon which to pursue his observations and inquiries at the bedside from the outset. It has therefore occurred to me, that it would be an invaluable acquisition to the student if a simple, methodized plan of clinical observation could be framed and combined in some convenient form, with brief but explicit instructions as to the best mode of procedure for investigating any given case, arriving at a diagnosis, and recording its history, symptoms, treatment, daily progress, and termination. I also conceived that if, at the same time, it contained in condensed, yet intelligible and readily accessible form, a compendium of the preliminary knowledge most essential for rightly interpreting and using the information thus acquired and recorded by the student, it would be of infinite service, by preparing him to profit by the more advanced teachings of the clinical physicians and surgeons, much of which is now lost to the junior students especially, by reason of their not having the necessary preliminary information.

These passages, slightly modified from the author's introduction, together with the title, entirely explain the scope and purpose of the work before us. Of its execution, we can, after a careful examination, speak favorably; and cordially, therefore, add our voice to that of the entire British press in recommending it to students and others desiring such a hand-book.

TRANSLATED FROM THE FRENCH, EXPRESSLY FOR THE MONTHLY.

Lectures on Diphtheria. (Egyptian Disease.) Delivered at L'Hôtel Dieu, Paris. By M. TROUSSEAU.

(Translated by the Editor from La Clinique Médicale de L'Hôtel Dieu, of M. Trousseau.)

(Continued from page 396.)

Malignant Diphtheria.

Much more terrible than the preceding Form—The Local Affection is nothing compared to the General Condition—It Destroys, not like Croup, by Asphyxiating through repeated Attacks of Suffocation, but in the same way as Septic Diseases, by a General Poisoning—Considerable Ganglionary Engorgements—Erysipelatous Redness—Coryza and Nasal Diphtheria—Diphtheritic Ophthalmia—Epistaxis—Hæmorrhages of all kinds—Anæmia.

GENTLEMEN—In the preceding lecture, I spoke to you of that form of diphtheria which can be called normal; of that form which,

commencing in the pharynx with the characteristics I have indicated to you, extends into the larynx, trachea and bronchi, and produces death by asphyxia. This is the most ordinary form, the form it takes on when sporadic; that which it almost exclusively assumes in certain epidemics, the most common even when malignant diphtheria prevails, of which I am now about to speak. In fact, in a family where four, five, or six persons are attacked with this disease, croup would be the general rule; the malignant form, that which carries off the sick by poisoning them like septic diseases, is the exception.

Many patients have exhibited it to us during the last few years, and among others, a little girl in whom you have been able to observe the progress of the disease, step by step, until its fatal termination.

This was a child twelve years old, who came one evening to the Hôtel Dieu, and was admitted into the wards of my colleague, Prof. Jobert, (de Lamballe,) who sent her to me. She had been taken sick only three or four days before, with a sore throat so slight, and accompanied with so little febrile action, that she did not complain, and her parents did not pay any attention to it. The difficulty, however, increasing, and an engorgement of the glands of the neck having become very manifest, she was brought to the hospital, and was sent to the surgical clinic. The nature of the disease was instantly recognized, and she was brought into our ward St. Bernard.

At our first visit, we were struck, upon examining the mouth, with the horrible gangrenous odor of the breath; we found the veil of the palate pushed strongly aside to the right, precisely as it is in those who are affected with phlegmonous angina of one side; we discovered upon this membranous veil a whitish exudation very clearly defined at its edges, and festooned upon its superior part towards the roof of the palate. This diphtheritic exudation extended over the pillar of the palate, and became lost in a kind of grayish putrilaginous mass, which covered the back of the throat, from which exuded a grayish sanious fluid of a powerfully offensive odor. Upon the right of the uvula, crowded completely to the left, on account of the tumefaction of the diseased parts, we saw a whitish concretion; the left side was intact, as well as the tonsil of that side; we also perceived one or two yellowish-white spots upon the posterior part of the pharynx. The nostrils were perfectly healthy. The tumefaction of the lymphatic ganglions of the angle of the jaw, and of the submaxillary ganglions, was considerable upon the right side. This tumefaction was also very painful. Nothing particular upon the left side.

We immediately decided that we had before us a case of pharyngeal diphtheria of a malignant form, one of the most terrible diseases, which never yields its hold unless combated by the most energetic measures, and which even then resists all our efforts in a very great number of instances. I then gave an unfavorable prognosis; for although the nose was not yet attacked, in which case I should from the first have lost all hope, the great engorgement of the cervical and submaxillary glands appeared to me to augur most unfavorably.

I immediately commenced the only treatment which offered me any

chance of success I cauterized vigorously the diseased parts with a solution of nitrate of silver, 50 grains to the ounce; then I blew powdered alum into the throat by means of a tube. The cauterizations with a saturated solution of sulphate of copper were repeated at night and the next morning. In the interval, insufflations alternately with alum and powdered tannin were repeated six to eight times during the day. Besides this I prescribed, and I lay much stress upon this point, that the child should be fed, should be made to take forcibly, if necessary, soup, chocolate, small cups of an infusion of coffee as an excitant and tonic, and at the same time I ordered some preparation of cinchona. When we come to speak of treatment, I shall tell you of the great importance I attach to alimentation, and my reasons for so doing.

Four days after the patient entered the ward, her condition was far from being improved. The ganglionic engorgement, which, from the first, made me prognosticate an unfavorable issue, was still greater, and comprised the cellular tissue of the cervical and submaxillary regions. A more alarming symptom had arisen; that is, an erysipelatous redness of the skin, as if a deep abscess of the parts existed. This erysipelatous redness, which Borsieri had pointed out, and which I shall have occasion to speak of again, does not ordinarily show itself except in cases of diphtheria of the very worst form.

The third day the nostrils were invaded. The evening before a slight redness was manifest at their inferior part, which increased so that the next day an abundant secretion was formed upon the surface of the pituitary membrane; a pseudo-membranous secretion, mixed with a small quantity of blood. The disease had extended to the nasal fossæ. This is a fatal symptom, for those in whom it is present almost invariably die; if not in the acute period of the disease, at least at a later stage.

Nevertheless, the cauterizations with the sulphate of copper were exactly and faithfully made, morning and evening; the insufflations of alum and tannin were repeated many times during the twenty-four hours, and the patient was fed as directed.

About the fourth day, the seventh of the disease, the aspect of the throat was satisfactory. The mucous membrane was almost freed from the exudation which covered it; the uvula was equally free; the tonsils, and the back of the pharynx, were almost completely so. But during the third day, several attacks of severe epistaxis occurred, making the case still more dangerous, by adding this complication to the ganglionic engorgements and the nasal diphtheria. The child was very pale, and greatly prostrated. The first bleeding followed an injection of the sulphate of copper; the injections were, however, continued. After each injection, a considerable quantity of mucosities ran from the nostrils, and twice, real false membranous concretions were thrown off; one of which retained the form of the part from which it came.

With these severe symptoms before me, although the pharyngeal angina was cured, although I did not fear the propagation of the disease to the larynx, (the respiration continued perfectly pure,) I pre-

dicted a fatal termination, and I told you that the child would become more and more prostrated, which nothing would relieve; that we should soon see her refuse all kinds of food and drink, and that she would pass away in a syncope.

The event justified my predictions. The little patient grew cold like a cholera patient; she became subject to syncope; the pulse was very feeble and slow, but the respiration remained free. We tried in vain to make her swallow something, however little it might be, and to overcome her disgust for food. Although the ganglionic engorgement was notably diminished; although the nose was better, no longer secreting that foetid ichor which had before run from it; although the erysipelatous redness had itself disappeared; although in respect to the local manifestations there was an apparent, though deceitful, amelioration, the child died, poisoned by the diphtheritic virus which had infected it. She died in a syncope, upon turning over, after refusing some drink offered her by the nurse who attended her; she died as patients affected with malignant diphtheria often die.

At the autopsy, we did not find upon the mucous membrane of the pharynx any trace of false membranous concretion. Under the influence of the topical treatment, the detersion was complete, and the pillars of the veil of the palate, which were covered with a putrilaginous deposit, simulating gangrene, were intact. The tonsil occupied its ordinary place, and showed no lesion, no gangrenous alteration. This confirms what I told you in the preceding lecture of the false appearance of gangrene, which diphtheria so often assumes.

This is, gentlemen, an example of malignant diphtheria, progressing slowly; you have seen it assume a more terribly active form, in the case of another child which died three weeks since, in the same ward. I will call your attention to other cases.

One of our most regretted confrères of the hospitals, whose name is known to all, and whose works are in most of your hands, Valleix, attended a child affected with membranous angina. It was not a very severe case, and recovered, thanks to the energetic treatment employed by our unfortunate colleague. Examining one day the throat of this infant, Valleix received in his mouth a little saliva thrown off in a fit of coughing; he took the disease. The next day he perceived upon one of his tonsils a little pellicular concretion, followed by a slight fever; a few hours afterwards, both tonsils and the palate were covered with false membranes. Soon an abundant secretion of a serous fluid ran from his nose; the glands of his neck, the cellular tissue of that region, of the inferior part of the jaw, were considerably swollen; there was delirium, and in forty-eight hours Valleix died, without presenting any symptoms of disease of the larynx.

Recently one of our confrères in the country visited a patient sick with diphtheria and croup, and was obliged to perform tracheotomy. During the operation the blood obstructed the trachea; so that suffocation was feared. Our unfortunate confrère, anxious, applied his mouth to the wound of the neck, in order to suck the fluid out of the air-passages; he inoculated himself with the disease. Forty-eight hours

afterwards, like Valleix, he died from malignant angina, and, like him, with delirium and other symptoms which I have just related to you.

How many sad histories can be added to these! In the same manner, my colleague and friend, Dr. Blache, had the pain of losing his son, one of the most distinguished *internes* of our hospitals; a young man full of promise, in whom great mental capabilities were united to the most thorough instruction. Henry Blache was left by his uncle, Doctor Paul Guersant, in charge of a child upon whom he had just performed tracheotomy, for croup. He watched three nights, and at the end of the third he felt a slight sore throat, and returning home, mentioned it to his father. Doctors Legroux, Roger, and myself were immediately called; we found the unfortunate young man in a high fever, and the tonsils covered with false membranes. In a few hours, the swelling in the neck became enormous; the nasal flux commenced, and was incessant; and at the close of the first day, delirium set in; and seventy-two hours afterwards, notwithstanding the most energetic treatment, we saw our patient die, without presenting any laryngeal symptoms.

This is an example, gentlemen, of a particular form of diphtheria, which can be contracted by contact with an individual affected with diphtheria of the ordinary form, in the same manner that a confluent variola can be contracted by contact with a patient afflicted with discrete variola. In this terribly malignant form, the poisoning seems to be immediately general; and where the characteristic concretion commences to appear upon the tonsils, in the nasal fossæ, the whole economy is deeply affected. This severe form is fortunately the most infrequent; still, in certain epidemics, it becomes more common. From 1822 to 1844, there was not a single case; but within the last few years, I have seen more than twenty cases of it here in Paris. For example, in two families, where I was called to attend some members of them for ordinary diphtheritic angina, I saw several persons die of this severe form, which is never recovered from.

Four years since, in one of the most renowned families of France, five persons were attacked with this disease. Among the five, two had ordinary diphtheria; the other three, two children and the mother, died from the malignant form. You will find quite a large number of facts related in the reports upon the epidemics of malignant angina which prevailed in France during the last few years, and particularly in the report of Doctor Perrochaud upon the epidemic which raged in Boulogne-sur-mer, from January, 1855, to March, 1857.*

It seems that at different periods, diphtheria, like other epidemic diseases, prevails with particular characteristics; at other times, these characteristics are quite different; and then, again, they reappear under the same form they at first took on, undergoing thus different transformations, which are resumed at some other time.

I should remark here, gentlemen, that for several years we have passed through one of those epidemic periods in which the malignant

* Mémoires de l'Académie de Médecine, t. XXII., p. xci.

form of diphtheria is much more frequent than it had been up to that time; the disease, such as we observe to-day, is, in fact, very different from that which has been so clearly described by M. Bretonnean, and recalls the description of it which has come down to us from the physicians of the seventeenth century.

Let us study the slow form of malignant diphtheria, which you will have to treat oftener than the other most terrible form. Although this is very serious, more so than typhus or cholera, or yellow fever, you still can hope to save a few patients; as to the other form, that which snatched from us Valleix and Henry Blache, it kills most unmercifully.

The young girl whose history I have related to you is an example of the first.

Pellicular concretions appear upon one of the tonsils; often their appearance does not differ from that of the false membranes of ordinary diphtheritic pharyngeal angina; but sometimes, also, they have a special condition. Of a tawny yellow color, they rest upon tissues of a livid red color, and the parts are often œdematous. The patients complain of soreness of the throat, dryness, difficulty in swallowing, sometimes even before there is any membranous production, or even redness, or anything apparent upon any point whatever of the pharynx.

The fever is quite high; it is not always, however, much more so than in the simple form of the disease. But what is never wanting in this malignant form, that which is redolent of its pestiferous character, to use the expression of Mercatus, (*pestiferi morbi naturam redolens*), is the ganglionic engorgement. It is considerable, and extends to the cellular tissue which surrounds the lymphatic glands. This sign, from the commencement of a frightful import, should arouse the fear that the disease is malignant in its character, and that it can resist all the therapeutical means that can be used to combat it.

The skin which covers the tumefied parts often takes on an erysipelatous redness, which we have noticed in our little patient, and which also has a very serious signification. This redness gives the impression of a deep abscess, which fact did not escape the observation of the older physicians. Permit me here again, gentlemen, to cite, as confirmatory of what I say, a passage from Borsieri: "*Nec rarum est*," says he in his chapter *De Angina Gangrenosa Maligna*, "in hujus modi morbo, præsertim cùm epidemice diffunditur, circà collum, pectus et brachia erumpere ruborem quandam erysipelatodem, sæpè cùm papulis morbillosis conjunctum aut exanthemata miliaria, papulasæ rubras in summam cutem alicubi prodire, quin iniò parotides ipsas glandulasæ maxillares jugularesæ tumefreri ac dolore." In this quotation you find the ganglionic swelling of which I have spoken, that erysipelatous redness which I have pointed out; and you also find mentioned those miliary and rubeolic eruptions which perhaps have some analogy to the scarlatiniform, the erythematous, and pemphigoid eruptions, to which attention was called in a recent discussion at the Medical Society of the Hospitals, by my colleague, Dr. G. See.

I return to the ganglionic engorgement. This is particularly seen at the level of the angle of the jaw, and under the jaw itself; at first attacking the side corresponding to the part of the pharynx which was first invaded by the disease; the next day attacking the other side, because at that time the other side of the pharynx is also invaded. The diphtheritic exudation spreads more rapidly than it does in the ordinary form. Most frequently it covers a part of the veil of the palate; not infrequently it occupies the eustachian tube. You may recollect, as it occurred quite recently, the autopsy of the little girl who died of malignant diphtheria. She particularly complained of excessive pain in the ear, especially when she coughed. It is a fact that, in a great number of cases, diphtheria of the pharynx extends into the auditory canal, at the same time that, we were about to say, it extends into the nares. After twenty-four, thirty-six, and forty-eight hours, the nasal fossæ are invaded. The existence of concretions in these cavities is a serious circumstance, to which I have already directed your attention when speaking of the little patient of the ward St. Bernard. Remember it, gentlemen, for when it occurs, even in apparently the most benignant form, at its commencement you will rarely find such patients, whether children or adults, recover. Of all the manifestations of the disease, I have said, and repeat it, that which takes place upon the olfactory mucous membrane is the most alarming. Of twenty persons attacked with *nasal diphtheria*, nineteen die; while of twenty affected with croup, a certain number can be saved by tracheotomy, as I hope to demonstrate to you hereafter.

You may recollect the autopsy of a child who was four or five days in our wards. He was attacked with diphtheria in another hospital. When we saw him, he breathed with difficulty and loudly; a thin serosity, without fœtid odor, ran from the nares, and was incessant. There was high fever. At first sight I saw the severity of the case, and told you that the little patient was attacked with diphtheria, from which he would die. He, however, appeared still fresh and vigorous; but nasal diphtheria was present, and my experience had taught its serious import. Upon examining the throat, we ascertained the existence of pellicular concretions covering the uvula and both tonsils. Cauterizations with a concentrated solution of the sulphate of copper were made to the throat and nose, and insufflations of tannin and alum. Notwithstanding all this the child died, without evincing the least laryngeal symptom. Upon opening the body, we found very thin false membranous concretions upon the tonsils; the aryteno-epiglottic ligaments presented traces of inflammation and a commencing plastic exudation, but no false membranes; no alteration was noticed in the larynx and trachea.

The child, then, did not die from croup, but from malignant diphtheria, and it was the presence of the characteristic exudations in the nasal fossæ which caused us to pronounce the fatal prognosis which was so soon realized.

How does this nasal diphtheria announce itself? You have seen it in the little girl who constitutes the subject of this lecture. At

first a redness is observed at the orifice of the nares—a redness analogous to that presented by any person having a coryza; the secretion from the pituitary membrane is increased, and the patient cleans his nose oftener than usual; the mucus secreted is slightly mixed with blood; most frequently there is at the same time an epistaxis. This *coryza*, when it appears in the course of a diphtheria, however slight it may be, is a serious symptom, for it indicates that the specific phlegmasia has invaded the nasal fossæ. In the course of twenty-four, thirty-six, or forty-eight hours, there is no longer any doubt; a sanious ichor, running in considerable quantity from the anterior nares, also falls backward into the throat; and you will find, upon examining the nose, either by opening the nostrils with the fingers or by means of a *speculum auris*, the mucous membrane lined with false membranes.

At the same time another symptom is hardly ever absent; that is, a weeping of the eyes, such as persons affected with lachrymal tumors, or an obliteration of the nasal canal, complain of. It is owing to the same cause—the nasal passage and the lachrymal canals being obstructed by the tumefaction of the mucous membrane which lines them. In some cases the diphtheritic inflammation and the false membranous concretions also extend from the nose to the eyes. It is not rare, in fact, to find, on turning over the eyelids, and particularly the inferior eyelid, the mucous membrane of the lid inflamed and covered with false membranous secretions, the specific inflammation having extended from the pharynx to the nasal fossæ, and from thence to the palpebral mucous membrane, by way of the nasal passages. This lesion of the lids is quite common, so much so that every year examples of it are seen at the Children's Hospital, principally in the malignant form of diphtheria which we are now studying.

These symptoms of nasal diphtheria, and of *diphtheritic ophthalmia*, have phases less severe in appearance than those of croup, so that the physician cannot help having some hopes of recovery, unless sad experience has taught him the lesson of their fatality. If he only takes into consideration the general phenomena—the slight febrile action, the absence of delirium—he cannot imagine that the state of feebleness, the ganglionic engorgements, can be such alarming symptoms; he will believe that when once the membranous exudations of the nose, or even those of the pharynx, have disappeared, there will be nothing more to fear. Under certain circumstances, notwithstanding their real severity, and although the termination of the disease is almost always fatal, some cases get well. Among those rare exceptions which I can report to you, the following is one which you have witnessed.

The case was a young boy, ten years and a half old, of a lymphatic temperament, with light hair and light complexion, and an intelligent face. He was brought here by his mother the first of September, 1855, and we at first diagnosticated a paralysis of the veil of the palate.

We were told that the disease commenced three weeks before, and followed another disease, which, from what was told us, was incontestably a buccal and nasal diphtheria.

In fact, from the very commencement, the child had complained of a sore throat, accompanied by swelling of the glands of the neck, which had not escaped the notice of his family. The invasion of the disease had been quite sudden, or at least the child had complained of it one day only, upon returning from school. He had then a high fever, and these symptoms continued forty-eight hours. During this time he threw off, through the mouth and nose, *white skin*, which his mother compared to pieces of flesh. These symptoms ceased spontaneously, without anything having been done for them. But two days afterwards they returned with the same characteristics, the child again expectorating and blowing from the nose these white skins. The family, rightly alarmed, feared that the child had the croup, though no one in the neighborhood was known to have had it. The child, however, did not cough; there was only a considerable difficulty in swallowing.

This disease lasted six days, and the convalescence was rapidly established, so that the little boy resumed his usual habits. Since then, he has exhibited symptoms which frighten his mother; they are a marked nasal tone and an impossibility to swallow without the drink returning immediately by the nose.

This was, then, a paralysis of the veil of the palate. Upon examining the throat, we ascertained that the membranous veil did not move in any manner during the act of respiration, and did not contract when we excited it with the end of a feather.

Again, the little patient said that he did not see as well as before he was taken sick; there was something like a mist before his eyes. The pupils, completely dilated, did not contract when the child was carried from the dark into bright daylight.

Finally, it seemed to us that he walked irregularly; but that was a phenomenon without much value, for we were told that this feebleness of the lower extremities had been observed for more than a year.

What was particularly observed by the family, was the sudden change in the character of the patient; from being gentle and quiet, he had become impatient and restless. The general health was in other respects very satisfactory. The urine was examined; it was of a pale color, slightly clouded by the addition of nitric acid and by heat. We recommended a tonic and substantial regimen. Unfortunately, we lost sight of this patient.

Thus, in this case, the nasal diphtheria was cured, and cured without the intervention of art.

Like examples, I repeat for the third time, are rare, exceedingly rare, and do not affect the general rule I have laid down. Notwithstanding the mildness of the general symptoms, the life of patients attacked by malignant diphtheria, attended with considerable ganglionary engorgements, and membranous exudations of the nasal fossæ, and palpebral conjunctiva, is seriously threatened.

Bleedings at the nose, I have told you, often precede the development of false membranes upon the pituitary mucous membrane; they are the most important premonitory sign, and continue even when the membranous exudation has lined almost the whole surface of the nostrils.

Our little girl lost in this way almost 100 grammes of blood, really a small quantity, and yet a few hours after this hæmorrhage, you have remarked a great pallor and deep discoloration of the skin. These bleedings from the nose have always been considered as very serious phenomena. "*Malignam significationem præbet sanguis stillans e naribus*," said de Heredia, one of the authors who wrote upon the epidemics of malignant angina which prevailed in Spain at the commencement of the seventeenth century; and further on, he adds: "*Periculosissimus censetur sanguinis fluxus ex naribus aut ore*." A French author, who also wrote about the gangrenous sore throats which he observed in Paris, in 1746, recognized the fact, that bleeding from the nose was a sign of great danger; and he states that in Picardy many children who presented this symptom died within nine days.

It is not, gentlemen, only the epistaxes which we observe, but hæmorrhages of all kinds, subcutaneous ecchymoses, enterorrhagia, hæmaturia, pneumorrhagia, &c. The following is a remarkable instance, which I extract from a work by Dr. Peter:*

"The first of August, 1858," says our confrère, "I was called from the Children's Hospital to see young Marie P—, living at No. 29 Rue de Sevres. This child had had a high fever for twenty-four hours, and a severe angina for ten hours. When I saw the patient I ascertained the existence of the tonsillary angina, and discovered a commencing scarlatinous eruption. The fourth day of the disease, the fever was increased, the patient coughed, and I recognized the existence of a pneumonia of the right side, an unusual complication in scarlatina. I prescribed Kermes mineral, and a blister to be applied to the chest.

"The next day, August 5th, a small membranous spot was developed upon each tonsil; the fever was intense; the scarlatinous eruption was of a violet color; the general condition presented all the characters of adynamia. I ordered cinchona, lemonade as a drink, and soup.

"The 7th the blister had ulcerated, and was covered with a membrane. The false membranes had increased in thickness and extent over the tonsils, and had reached the veil of the palate; they were of a grayish color, and emitted a fœtid odor. I sprinkled the surface of the blister with a mixture of powder of cinchona and camphor, and cauterized the throat with nitrate of silver, and prescribed lemonade as a drink.

"The 8th, the nose commenced to run, and at the orifice of the left nostril I perceived a rudimentary false membrane. The scarlatinous eruption was of a little less violet color, but the fever was intense. The blister, ulcerated at its borders, extended as the membrane which covered it thickened. The pneumonia, however, instead of being resolved, increased in extent; there was a souffle and bronchophony in the inferior half of the right lung.

"From the 9th to the 11th, the general condition was still aggra-

* Quelques Recherchés sur la Diphthérie. Paris, 1860.

vated. Here and there, a few sparse portions of the epidermis were detached upon the arms and legs, and the eruption had become slightly paler, but the fever remained high, and the patient exhaled a fœtid odor from the nose and mouth. The edges of the nostrils were excoriated. From these orifices ran an acrid fluid, which also excoriated the upper lip, and a false membrane could be seen lining the interior of the nasal fossæ. The whole pharynx was invaded by the false membranous product; the deglutition had become very difficult. Notwithstanding frequently repeated injections into the nose and throat, the fœtid odor persisted.

"The 12th, I found the symptoms of a commencing pneumonia upon the left side; upon the right I heard râles, which were almost gurgling; there was, besides, an abundant expectoration of purulent and fœtid sputa. A scarlatiniform eruption reappeared; the excoriations of the upper lip were covered with diphtheritic exudations. I observed upon the neck two bullæ of pemphigus.

"The 13th, these excoriated bullæ were already covered with false membrane; numerous *petechiæ*, *scorbutic ecchymosis*, appeared upon points subjected to pressure; there was a *hæmorrhage upon the surface of the blister, a bleeding at the nose, and the false membranes of the pharynx were infiltrated with blood.*

"The 14th, a few bloody sputæ indicated to me that there was a *pulmonary hæmorrhage*; there was also *hæmaturia entérorrhagia*; symptoms I had foreseen, and which I had warned the parents of the night before. The same day, as I expected, the voice changed, became hoarse; the false membranes had passed down into the larynx; at night, the voice was more decidedly croupal.

"The night was a most anxious one, and the patient died the morning of the 15th August, the fifteenth day from the beginning of the disease."

You will hardly find, gentlemen, a more complete or more sadly interesting case than this. If scarlatina had its influence in this case, the child died from diphtheria; from a very severe malignant diphtheria. The scarlatinous angina was the point of departure for the diphtheritic fluxion, and the pellicular disease closed the scene; either on account of its particular character, or because it found the sick person under the influence of a disease itself severe and septic; in a word, in such conditions as would engender a great malignancy, the diphtheria assumed a terrible form.

The *deep discoloration of the integuments*, the anæmic tint to which I call your attention, should not be solely attributed to the loss of blood, for this can be relatively slight and even be wanting, and yet the discoloration be present. This is, in fact, a constant and invariable phenomenon in the malignant form of diphtheria. It indicates the cachectic condition into which the individual has fallen, and a series of symptoms then appear which we are powerless to relieve; an anorexia which cannot be overcome, and which is observed in adults as well as in children. I have often tried to overcome it; I have tried all kinds of means; threats and even force have been used in young patients to make

them take food, but uselessly; they resisted everything; would take nothing; neither nourishment nor drink, and permitted themselves to die of hunger.

Then also the *skin became cold*, followed by an excessive agitation, or an *anxiety* painful to behold, recalling that witnessed in cholera patients, or again a kind of composure more startling even than the agitation. Finally, at a moment when least expected, if the patient rises suddenly to gratify a wish or to change a position, he dies as suddenly, in a syncope, which occurrence you saw take place in our little girl.

This unfortunate child, gentlemen, has offered to you a type of the destructive disease, the outlines of which I have endeavored to draw. Guard it well in your memory, for in the course of your practice you will unfortunately have too frequent occasion to meet similar cases.

EDITORIAL AND MISCELLANEOUS.

— Since our last issue, the profession of this city has been called upon to mourn the decease of another of its prominent members—D. MEREDITH REESE, M.D., LL.D. The position which Dr. Reese held in the profession for many years made his reputation as extensive as the country; few physicians were as widely and as favorably known as he. To many his death will be very unexpected, for his stout figure and his full-toned voice indicated the vigor of ripened manhood.

Dr. Reese was born early in the present century, so that his age at the time of his decease was not far from sixty. He graduated in Medicine in the University of his native State, Maryland, in the year 1819, and subsequently commenced the practice of his profession in Baltimore.

As a medical man, Dr. Reese was distinguished both as a teacher and writer.

As a teacher, he at several different periods occupied a Professorship in the Washington University of Baltimore, the Albany Medical College, the Castleton Medical College, and the New York Medical College. He occupied the Chair of the Practice of Medicine in the last-named institution at the time of his death. A fluent speaker, with an easy declamation and forcible manner, he was an agreeable teacher, and one who attracted the student.

As a writer he is equally as well known. He was, we believe, at the time of his death, the oldest editor of the medical press in this country. His writings, exclusive of his communications to his own

journal, were quite numerous, and were not confined to medical subjects. They all evince the energetic, enthusiastic character of the writer, and show as well the carelessness in style which naturally results from the rapidity with which he performed his literary labors.

Dr. Reese was greatly distinguished as a debater. There are very few remaining behind him in our ranks who can be in any degree compared to him in this respect. Bold, ready, with a tact which told him at each instant how far he had the sympathies of his audience; with an abundant vocabulary, and a mind sufficiently close in reasoning not to be wandering, and not so close as to be dull; with a command over his own resources which never failed him, and with a power to weave an argument which held the attention with curiosity at each step, and which surprised the reason at the subtle, though not at all times logical, argument at the close—with all these qualifications, he was by far the best extemporaneous debater on medical topics in our profession that we have ever heard.

In his late writings he was more inclined to polemics than to didactic essays, and often, by the free use of sarcasm, did much to offend individual members of our profession, and to eventually injure his own reputation.

His last sickness was somewhat painful; for several weeks he was unable to lie down for any length of time, on account of dyspnoea. He had for some time been suffering from a cardiac disease, which became more manifest during the early part of spring, and eventually led to a dropsical effusion into the lower extremities, which were so distended that the fluid escaped through the integuments. Mortification of the parts supervened, and tetanic symptoms finally developed themselves, which terminated his life the morning of May 13.

— Several works on Military Surgery have quite recently been issued from the press. The present number contains a brief notice of the little work by Prof. Gross, published by Messrs. Lippincott & Co. We have just received another from Messrs. Baillière Brothers, entitled "A Practical Treatise on Military Surgery," by Frank Hastings Hamilton, M.D., an account of which we expect to give in our next issue. It is an octavo volume of about 240 pages, and in addition to the chapters on Military Surgery, contains two others: one on Dysentery, prepared by Prof. Austin Flint, and another on Scurvy, by Prof. B. W. Macready. The plan of the work we shall give hereafter. The price of the volume is \$2.00. It is said a third work has been issued by a house in Cincinnati, and is the joint labor of Dr. C. S. Tripler, U. S. A., and Prof. George C. Blackman, of Cincinnati. We have not seen the volume, and therefore cannot speak of its content

The celebrated work of Dr. Lewis Stromeyer, Physician of the Royal Hanoverian Army, is being translated by a physician of this city. We hope to be able to give some chapters of this work in future numbers of the MONTHLY. The number of the American edition of the *Lancet* for the present month contains a chapter from Mr. Guthrie's pamphlet, on the Hospital Brigade, entitled "Directions to Army Surgeons on the Field of Battle." This constitutes the literature of military surgery for the present.

— *Hunt's Merchants' Magazine*, which we have received for some time past, although not falling strictly within the limits of subjects treated of in a medical journal, yet contains from time to time statistical articles upon branches of science so allied to medicine that it would fully repay the medical man to be more conversant with its pages. This Magazine has recently undergone an editorial change. The present editors are Mr. I. Smith Homans and Mr. William B. Dana. The numbers for May and June contain articles upon Fibrilla, or cottonized flax, which, if the statements made are realized, will make a great change in the agricultural and manufacturing products of this country. The Fibrilla is the fibre of flax prepared by recently invented machinery, so that it can be adapted to machine-spinning.

The difficulties which have heretofore prevented flax from being used in manufacturing purposes where cotton is now used, are stated to be overcome, and that now, flax prepared by the method indicated "can be either spun or woven on cotton or woolen machinery, mixed with either of those substances in smaller or large proportions." Various articles, such as stockings, satinet, &c., have already been made, and at a cost and finish such as warrants the belief "that it is destined to fill a highly important function in the economy of one of the most valuable and essential branches of human industry."

— Prof. Peaslee has recently tapped a patient with ovarian dropsy, and obtained *one hundred and thirty-five* (135) *pounds* of dropsical fluid. The abdominal circumference of the patient (a young lady) before the operation was *five feet and seven* (67) *inches*. If we mistake not, the quantity of fluid evacuated exceeds that of any other recorded case.

— The volumes of the New Sydenham Society's Publications for 1860 have arrived, and can be procured of the Secretary for New York, Dr. C. F. Heywood, No. 66 West Twentieth Street. The subscription for 1861 is due. Those who wish the volumes for the present year will send \$6.00 to the Secretary, that their names may be forwarded to the home office.

— A new Medical School, recently chartered by the Legislature of this State, under the name of *Bellevue Hospital Medical College*, has been recently organized, with the following Faculty: Isaac E. Taylor, M.D., President and Professor of Obstetrics; Austin Flint, M.D., Professor of Theory and Practice of Medicine; J. R. Wood, M.D., Prof. Operative Surgery and Surgical Pathology; Benj. W. McCready, M.D., Prof. Materia Medica and Therapeutics; Frank H. Hamilton, M.D., Prof. Military Surgery and Pathology, and Accidents to Bones; Geo. T. Elliott, M.D., Prof. Obstetrics; Lewis A. Sayre, M.D., Prof. Orthopædic Surgery; R. O. Doremus, M.D., Prof. Chemistry; J. W. S. Gouley, Prof. Anatomy and Microscopy; Stephen Smith, M.D., Prof. Principles of Surgery; B. Fordyce Barker, M.D., Prof. Obstetrics; A. B. Mott, M.D., Prof. Surgical Anatomy; Austin Flint, Jr., M.D., Prof. Physiology; C. Phelps, M.D., Demonstrator of Anatomy.

— We hope those who have been the recipients of the MONTHLY for the last year will not forget that a fair remuneration should be made us in return for the journal. Although the times are hard, the small sum due, when neglected to be paid by a large number of subscribers, embarrasses us, and makes our labors doubly difficult. We appeal to the honor of our delinquent subscribers to pay their subscriptions as promptly as they would any other debt. To owe for a medical journal should be the last complaint against one of the profession.

Honoraria.—The great incomes of a few physicians are made, not by the frequent receipt of *honoraria* of unusual magnitude, but by incessant labor, combined with the fact that the great reputation of these men enables them at all times to claim the highest fees permitted by custom. We read of Dr. Dimsdale receiving in 1768, from the Emperor of Russia, for inoculating the Empress and her son, a fee of £12,000, a pension for life of £500 per annum, and a title of nobility; of the Emperor Joseph of Austria, on his death-bed, making his physician, Quarin, a Baron of the Empire, and giving him an annual pension of £2,000; of Sir Astley Cooper, in one instance, receiving a fee of £1,000; of a provincial practitioner since Sir Astley Cooper's time, receiving a fee of £2,000; and better still, of another provincial practitioner, who very lately has been enriched by the gratitude of a patient who possessed no relatives, with a comfortable estate worth about £700 per annum. It is pleasant to learn that Sir Astley Cooper received annually for some time, £15,000, and that one year his receipts amounted to no less than £23,000; that Dr. Chambers' income reached nearly £9,000 per annum; and that in one particular

month he pocketed £1,100 in fees; that Dr. Baillie received in one year £11,000; and that to speak of some of the older physicians, Dr. Mead's income from practice amounted for several years to between 5,000 and £6,000; and Dr. Lettsom's receipts in one year reached £12,000. Dr. Fothergill's income, we may also add, averaged £6,700 during the last twenty-five years of his life. He, it is said, left a fortune of £80,000; yet he strove to banish "all thoughts," to use his own words, of practicing physic as a money-getting trade, with the same solicitude as he would the suggestions of vice or intemperance.

Rue and Savine in certain Metrorrhages.

BY M. BEAU, OF THE HÔPITAL DE LA CHARITÉ.

M. Beau considers the abortive properties of rue and savine as very doubtful; but their effects, insignificant when the uterus is healthy, are very apparent in the pathological state. Rue is for the uterus what digitalis is for the heart, cantharides for the bladder, and bella-donna for the muscular system. Still more, rue and savine succeed when secale cornutum has failed completely. These tonics are specially indicated when hæmorrhage is brought on by a pathological product, such as a fragment of placenta or some *débris* of the fœtus; but they may also be very advantageously employed when the uterus is unimpregnated, if it be the seat of complicated hæmorrhage, even in anæmia or chloro-anæmia. The following formula is recommended:

R.—Pulv. rutæ, centigrammes,	-	xv.
Pulv. sabinæ,	"	51.
Syrup, -	-	q. s.

Six pills are made, one of which should be taken in the evening and morning. In anæmic females, Beau prescribes iron as soon as the hæmorrhage has ceased. He finds it of good service to add one or two centigrammes of powdered rue, daily, to the ferruginous proportions employed.—*Revue de Thérapeutique.*

L. H. S.

—The Medical Directory for Great Britain, now for the first time published in a single volume, contains the names of more than 16,000 practitioners in various departments of the healing art. The pass lists of the examining bodies show that the yearly average of the additions to the licentiates in physic and surgery considerably exceeds one thousand.

—The meeting of the American Medical Association, which was to be held in Chicago this month, has, on account of the disturbed state of the country, been postponed until June, 1862.

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